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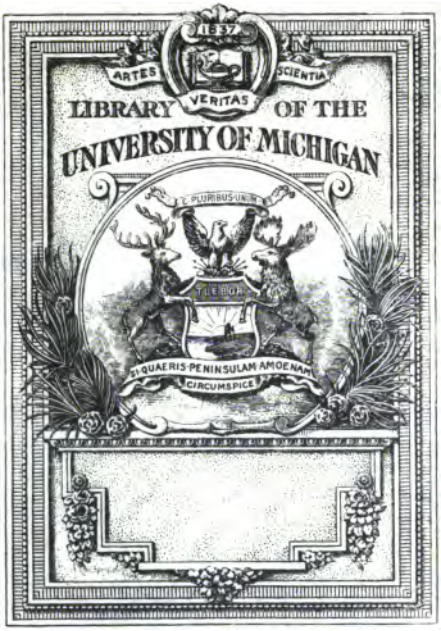
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Wall Street
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A Study of Recent Financial Tendencies

By

Charles A. Conant

Author of "A History of Modern Banks of Issue," etc.

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PREFACE

THE essays contained in this volume were written for the purpose of setting forth the magnitude of the problems presented by the modern tendency to capitalization and of removing misapprehensions on the subject which seem to have obtained a lodgment in the minds of a certain portion of the public. In a country like the United States, whose phenomenal expansion has been the admiration and envy of competent foreign observers, it has been inevitable that this expansion should create serious new problems and require many new experiments in regard to the organization of the money market, the powers of corporations, and the relations of the latter to the State.

There is little reason to doubt that in the long run these problems will be solved by the American people with their

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usual sobriety and good sense. It is to be regretted, however, that a degree of passion has been imported into their discussion which tends to hinder such a solution rather than to hasten it. Many organs of public opinion, even among those which have been credited with conservatism and sound economic views, have been swept along upon a current of popular agitation in favor of the extension of the power of the State in a manner radical in itself and far beyond any previous exercise of it sanctioned by experience or by American political ideals. The denunciation of the stock exchange, one of the most necessary functions of modern industry, and the abuse of large corporate interests have become undiscriminating and extreme, even where in the minds of those who have made them many limitations and reservations undoubtedly existed. These expressions have tended to stimulate a degree of popular prejudice which militates against a dispassionate solution of our new national problems.

There seems, under present conditions, to be too wide a chasm between men of action and men of thought. The former, impatient of exaggerated and destructive criticism of their projects, and especially of their motives, and little accustomed to spending their time in the refinements of literary discussion, have allowed misrepresentations to pass unchallenged, because they have not discovered in many of the organs of public opinion a disposition to weigh their actions impartially or to discriminate between the scrupulous and the unscrupulous in the financial world.

Misled by this silence, those who address the subject from the side of editorial chairs and magazine articles, have become more violent in their criticism of the stock exchanges, the financiers, and the industrial combinations, and have seemed to forget, even where they would not directly deny, that a large element of good must result to the country from the economic experiments which are now being tried. They seem to forget also that by treating large corporate interests

as outlaws, unworthy of a fair hearing in the court of public opinion, they only tend to increase the tendency which they deplore,—the tendency that corporations, thus driven to bay, may resort to questionable and illegal means for self-preservation.

It is the aim of this book to set forth in some degree the operation of economic principles in the financial world and the dangers of proceeding too rapidly and too rashly in extending the area of Federal intervention into fields heretofore reserved for the States and in fettering that freedom of action and of initiative which has been one of the essential causes of our national progress. It is not proposed to present a final solution of all the problems dealt with. They are subjects which are not likely to be exhausted this year nor the next,—perhaps not within the time of men now living. It is proposed here simply to submit on certain phases of these subjects a few considerations which have thus far been more or less obscured.

The discussion in regard to putting China upon the gold standard is an outgrowth of the work of the Commission on International Exchange, of which the author has the honor to be a member. The purposes of this commission have not been fully understood in some quarters, as the natural result of the highly technical character of many of the questions with which it has had to deal; but the members of the commission themselves have never doubted that the country would support their efforts to bring the silver-using countries to the gold standard by the most practicable and efficient means attainable under existing conditions. Already several of the countries of South America have followed British India and the Philippines in the adoption of a gold exchange standard similar to that here recommended for China, and much progress has been made by Professor Jeremiah W. Jenks of the commission in persuading Chinese officials of the economic importance of the adoption of a sound monetary system.

Whether immediate success is attained or not, the work of the commission has undoubtedly hastened the day when commercial transactions everywhere will be conducted upon a gold basis.

I desire to acknowledge my obligations to the publishers of the *Atlantic Monthly*, the *North American Review*, the *International Quarterly*, and the *Review of Reviews* for their permission to use the articles which are reprinted. I am also under special obligations to the owners of the "Consolidated Library," the Emerson Press of New York, for permission to use the chapter on "The Economic Progress of the Nineteenth Century," which was written especially for that publication. This chapter and all others have been carefully rewritten, in order to bring the statistical matter up to date and to otherwise improve them as far as possible.

CHARLES A. CONANT.

NEW YORK, 38 Nassau St.
July 1, 1904.

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WALL STREET AND THE COUNTRY

I

THE FUTURE OF UNDIGESTED SECURITIES

THE perturbations to which prices have been subjected on the New York Stock Exchange during the past year have naturally caused revulsions of feeling among those who have suffered from them, and much questioning of the wisdom of some of the recent operations of prominent American financiers. It is a familiar aphorism that "Wall Street" is very popular in periods of ascending prices, and is very unpopular in periods of declining prices. The public often seem to forget that quotations in Wall Street are only the mirror of their own estimate

of the value of securities, and that most financiers would be as well pleased as outsiders if they could warp this mirror to give the reflection of a constantly ascending value to the properties which they control. There are many lessons to be learned from recent experiences, one of the most obvious being that the outsider should not enter the stock market in the gambling spirit, but only for investment, and then only when he has made a careful study of values of properties and their earning power, and of the conditions which affect the market.

The creation of industrial companies during the past five years and the ascending prices of their securities until within the past year have written a new chapter in the history of the world's effort to work out its economic destiny. It has afforded a new illustration of the law of the survival of the fittest. Practically every form of financial enterprise has had to go through the same birth-pangs when it was a new and untried project; and only those features of it

have survived which have been found to possess real economic value. It is usually those who initiate the new methods who take the greater risks. If their projects will not stand the test of competition, they carry down their projectors with them to disaster; if they succeed, they sometimes confer rich rewards upon the far-sighted and venturesome pioneer; but in the latter case they render a net economic service to the community. It is the experience through which the new methods of finance have passed, and that through which they are yet to pass, which is to determine whether they have in them elements of survival.

The mechanism of modern finance has been devised piece by piece to meet the constantly growing demand for more efficient methods of giving mobility to capital. By mobility is meant facility for transferring capital promptly and without loss from one person to another. It was the use of money which primarily made possible the transfer of capital when trade began to emerge from the

condition of barter. It has been the function of modern commerce and finance, as capital grew in volume, to devise new means of transferring it from place to place and from industry to industry. Hence has arisen the complicated but symmetrical structure of deposit banking, note issue, the joint stock company, the negotiable security, the produce and stock exchanges, the bankers' clearing house, the stock exchange clearing house, the cable transfer for credit, and the arbitrage of stock and exchange transactions, by which the change of a fraction of one per cent in the rate indicating the demand for credit in one market would put at its command the surplus resources of other markets.

This great fabric has been rendered necessary by the growth of the fund of capital seeking investment. This growth in the volume of capital has been the phenomenon of our generation. It has been a growth of astonishing rapidity, because the increase in the investment fund has been much more rapid than the increase

in the total capital of the community. This has resulted from a simple process of mathematical increment. If an agricultural producer in 1850 had an annual producing power which might be expressed by $350, of which $300 was necessary to supply his actual physical necessities, he would have a surplus of $50, to be made a part of the investment fund of the community. If ten years later, in 1860, he had increased his producing power by one seventh, his total annual product would be $400; but the effect would be felt upon the investment fund of the community, not merely by the increase of one seventh, or about 15 per cent, in his total product, but by an increase of 100 per cent in the net product. Assuming that his actual needs were still supplied by $300, he would have $100 for investment where he formerly had $50. If by 1880 his annual producing power had increased still further by one fourth part of its efficiency in 1860 to a total of $500, the surplus funds seeking investment in the market would have risen by another 100

per cent within twenty years, or by 400 per cent within thirty years.

These conclusions, based upon hypothesis, are sustained by the evidence. The increase in the capital employed in manufactures over and above the normal increase in proportion to population is one of the gauges of the increased fund of saving in the community. This increase was from $2,118,208,769 in 1870 to $9,831,486,500 in 1900. This increase of more than $7,700,000,000 in manufacturing capital since 1870 is paralleled by the increased application of capital in another direction,—the construction and equipment of railways. The total liabilities of American railways, chiefly upon their capital stock and funded debt, increased from $3,784,543,034 in 1873 to $14,270,301,564 in 1902. If the increase had been only in proportion to population, the total investment at the present time would be only about $7,000,000,000, leaving a residue of an additional $7,000,000,000 as a result of the increased producing power of the people of the United States under modern

conditions. The two items of manufacturing capital and railway investment thus account for an investment fund of $18,000,000,000, which has been accumulating during the past generation, and these are only illustrations of the great fund of saved capital seeking investment which has been accumulating in recent years in every field of productive industry.

Capital available for investment is subject to the law of supply and demand. In this respect, it does not differ from commodities of a more specific character. Other things being equal, two important elements operate upon the price paid for an investment,—its safety and the net return paid in interest or dividends. A high degree of safety will contribute toward raising the price of an investment, but this rise in price will render it less attractive upon the other side by reducing the return upon it. For the owner of an investment security, and especially for him who has it to sell, a scarcity of safe securities and a rise in their price are acceptable and desirable. For the owner of capital

seeking investment, however, an excess of such capital in the market and a high price for securities are an injury, because they reduce the earning power of his capital, in whatever particular securities he may invest it. To meet his needs, new demands for capital must be found from time to time, equal to the amount of capital created.

To find such openings for investment is the business of the financier and promoter. He found them early in the nineteenth century without difficulty, because new demands for capital were springing up faster than they could be met. When society is in a stationary state,—that is, when there are no important new inventions or changes in social conditions,—saved capital accumulates faster than opportunities for secure and profitable investments present themselves. The tendency of such a condition is to correct itself by creating new wants, and hence invoking a demand for the capital to provide the mechanism to supply them; but this tendency has not prevented on sev-

eral occasions the serious congestion of savings beyond effective demand and a consequent fall in the rate of interest.

In modern times, more than in those more remote, there has been a frequent tendency to the accumulation of saved capital temporarily beyond the legitimate demand for it for the creation of new enterprises. The eminent French economist, Paul Leroy-Beaulieu, in discussing this subject in *L'Économiste Français* of January 28, 1899, calls attention to the fact that there were interruptions in the downward course of interest when steam came to be generally employed as a motive power between 1850 and 1865, and again after the great destruction of capital in the Franco-Prussian war. But, he declares,—

"after each of these interruptions, the rate of interest again tended to decline to a level lower than before; so that, in taking as the point of departure the beginning of the last quarter century, or that of the last half century, or that of the last century, — the year 1874 or the year 1850,— it may be noted that the rate of interest has considerably fallen, not

in a straight line, it is true, but in a broken line, and that never in our history was it as low as in 1897."

One of the best proofs of this superabundance of capital in the market about 1897 was the great number of cases in which governments and stock companies successfully sought to convert old obligations on which they were paying a high rate of interest into new ones paying a low rate of interest. Great Britain refunded her consolidated debt in 1888 at two and three quarters per cent, and in 1897 and 1898 the quotations of these new issues reached 112, and even a maximum of 113⅛. The great Prussian conversion was operated during 1897, and applied to $850,000,000 of consolidated four per cent securities. These four per cents were quoted at 104.5, and the three and a half per cents were quoted at 104.2 in October, 1896. The three per cent obligations issued in 1890, and then quoted at 86.5, reached par on July 5, 1895, and stood at 99.6 on October 5, 1896. Herr Miquel, the Prussian Minister, in announcing his project, recalled the fact that

in 1894 France had converted her four and a half per cents into three and a half per cents; that Sweden, Norway, Luxembourg, Zurich, Saxe-Gotha, Wurtemburg, and Bavaria had converted four per cent into three and a half per cent securities; and that Denmark, Belgium, Holland, Bremen, and Berne had converted three and a half per cents into three per cents, not to speak of the great Russian conversion of five per cents into four per cents.

In the United States, in spite of the fact that a new country usually makes large demands for capital, the supply of it tended to exceed the legitimate and effective demand down to 1897. The fact that this increase in the supply had greatly reduced its capacity to earn interest is plainly indicated by the facts set forth in the spring of 1903 by Professor Meade[1]:

"For the last thirty years the investment rate of interest has been steadily sinking. In the early Seventies seven per cent railway bonds were

[1] *Trust Finance*, p. 243.

common. In the next decade these were largely replaced by five per cent bonds, and in recent years three and a half per cent bonds have been generally issued by railway companies. At the same time that the interest rate was falling, the price of a $1000 bond increased. In the Seventies railway companies often paid ten per cent for money. At the present time three and a half per cent is the ordinary rate."

It is clear that this great accumulation of capital would be employed with great difficulty but for the organization of a system of transferring it readily from hand to hand and place to place. If every one who saved was compelled to employ his savings under his own personal care and direction in order to make them fruitful, many difficulties would arise and serious blunders would be made. Large savings would seem in the natural course of events, therefore, to have suggested the organization of means of employing them without imposing the task directly upon each individual who had made savings. This has been the case in advanced commercial society, but has not been the case in undeveloped society.

The economic efficiency of Europe and America is due in a large degree to the fact that saved capital does not repose in idle hoards, but is transferred as fast as it is saved into hands which are able to put it to productive use. In all civilized countries the mechanism of credit has now attained a considerable degree of efficiency, but this efficiency varies to a marked extent from country to country.

Among the methods of putting capital into negotiable form, these may be enumerated: attracting deposits to banking institutions; the organization of stock companies for banking and other large enterprises; the organization of railroad companies; the capitalization of industrial enterprises as stock companies; the diversification of banking methods and of the forms of security investment.

It is not necessary here to dwell upon the expansion of banking in its simpler forms. This has been more obvious to the ordinary observer as a means of accumulating and transferring capital than some of the other features of the modern

organization of credit. Next in order to banking deposits as a part of the new mechanism of finance comes the joint-stock company. A joint-stock company affords the means for dividing the ownership of properties in such a way that, on the one hand, an individual of small means may become part owner in a great enterprise, and, on the other hand, enterprises may be successfully carried out, of a magnitude which could not well be undertaken by a single individual. The creation of share companies divides the risk of an undertaking among many persons, and places the enterprise beyond the accidents of a single existence by giving it a fictitious body dowered by law with continuing life.

When these properties are listed on the stock exchange they are afforded a general market, in which it is easy to obtain a definite test of their value. A mill or a factory which is in private hands is salable or not according to individual and local circumstances. When not converted into the form of shares, a small property of

this character has a market which is narrow and uncertain. The property may pay a fair dividend upon the capital invested or upon the cost of replacement, but unless it happens to attract the attention of a capitalist who is also an expert in the same line of industry, it cannot be sold at the will of the owner. When, however, it is a part of a property which comprises many other mills, and this property is represented by bonds, preferred stock, and common stock, distributed among a multitude of owners and listed on the stock exchange, then it is in the power of the individual owner to part with his property at will at the quotations of the market.

One of the natural consequences of the abundance of capital seeking investment is the tendency to produce new forms of securities. The evidence of this is afforded by the great variety of securities which are now at the command of the investor in the principal markets of Europe and America. The first form of investment offered in the stock markets was government

obligations. These represented capital taken from the community and often applied in a manner which was not economic, for the purposes of war or preparations for war. Then came the primitive form of the stock company, which was simply the issue of shares establishing a common and divisible right in a large property. It has remained for recent years to develop the preferred share, the mortgage bond, income bonds, convertible bonds, debentures, and many other forms of obligation.

These various types of securities offer a variety of investment which permits each investor to choose among them according to his individual valuation of the relative advantages of risk with large returns, security with small returns, prompt returns or ultimate profit. The mortgage bond of a first-class railway, varying little under ordinary conditions in its market quotations because it pays a fixed income, is the most secure investment after the government bond, and the most appropriate for the investment of trust funds.

The preferred stock of a well-established investment enterprise offers a fixed return with perhaps a higher degree of risk, and is, therefore, likely to pay a larger return in relation to its price than the bond. The convertible bond offers a high degree of security, with the additional allurement of admitting the bondholder to a share in the expanding profits of the preferred shareholder when the price of stock rises above the price of the bond.

Every form of investment which proves more attractive to a certain class of investors than previous forms adds to the means for drawing capital out of hoards and private hands and putting it at the command of the community. If bonds and ordinary shares prove unattractive to a certain type of investor, then the market where only those forms of investment are available does not afford the highest facilities for drawing hoarded capital from idleness into utilities. The device so frequent in the organization of American industrial corporations, by which the assured earning power is capitalized as preferred stock and

the contingent profits of bankers and promoters are converted into common stock, to be sold for what it will bring or laid away until it earns dividends, has not until recently been available for the French financier. Hence the inducement was lacking to unify and strengthen French industry by consolidating old companies and putting the best equipment and most far-sighted management at the command of new companies.

The countries of Europe, especially those of the Continent, have much to learn from America in diversifying the forms of investment so as to put saved capital to its most productive use; but America has also something to learn from Europe. We have done much more than France and Germany to draw the small capitals of the masses into our commercial banks; but they have developed forms of investment which we have not tried, or which we have not managed with prudence.

A striking instance of the diversification of banking methods which has thus far failed to obtain a firm footing in America

is the mortgage loan bank. The purpose of such an institution is to give to the ownership of real estate something of the transferability and divisibility of other property. This is accomplished by converting the aggregate of many small mortgages upon real estate into negotiable bonds. In Europe great banks of this character exist in France, Germany, Austria-Hungary, Spain, and several other countries, and recently the system has been extended to Egypt. By the sale of a block of debenture bonds, secured by mortgages upon the land upon which loans have been made, the investor has a security which is negotiable at any time on the market, instead of dealing with a single mortgage which he might find difficulty in selling, in case of need, for what he paid for it.

There is no doubt of the perfect practicability and safety of the system, when loans are made to only a legitimate percentage of the ascertained value of the property and other proper precautions are taken. The Crédit Foncier of France,

which is engaged in such business, has mortgage bonds out to the amount of about $350,000,000. In Germany thirty-three such banks have similar obligations to the amount of more than $1,500,000,000, scattered over every part of the empire; while the Land Mortgage Bank of Austria-Hungary has debentures of nearly $40,000,000, and the Mortgage Bank of Spain has similar obligations of $17,000,000. These institutions practically bring into the security market a large part of the land values of Europe. A mortgage bank of this sort is able to increase its loans to the limit of the debentures which it can sell, and every few months witnesses an offer of a block of such securities, which are eagerly subscribed for by those seeking a safe and steady investment.

The genius of American financiers and promoters has blazed out investment paths of its own. The path followed during the last few years has been the conversion into large corporations of industrial enterprises. The *Wall Street Journal* recently estimated the new securities thrown upon

the market as a result of this process at nine billions of dollars, and declared:

"The next stage was the sale of these securities to people who had up to that time neither been owners of plants and manufacturers, nor investors, but who, tempted by the novel opportunity, invested their money in the new industrial securities. The fact that the United States Steel Corporation now has something like 55,000 stockholders is the best demonstration of this that any one could wish. Consequently, the industrial promotions had the effect of tapping to quite a large extent a fund which had heretofore not been available to the security market, having found investment largely in savings banks, real estate, etc."

When capital began to accumulate rapidly, therefore, after the recovery from the long prostration of 1893–97, and only a limited outlet was found for it at first in the creation of new manufacturing plants and the extension of railways, the financier turned naturally to the project of organizing manufacturing industries upon the basis of stock companies. Other reasons, like the severity of competition, undoubtedly produced the tendency to consolidate industries by bringing to an

end useless duplications of expenditure and getting rid of competition. These causes, however, could not have produced all the recent phenomena of the money market if there had not been a great fund of capital in the market seeking new investments. There would not have been the capital available in the hands of one manufacturer to buy out another, or in the hands of promoters to buy them both out, which has been found available under the conditions of recent years.

When, however, the earning power of a number of mills or factories could be capitalized into bonds and preferred stock, a supply of securities could be thus created which would meet the demand for new forms of investment arising from among those who were rapidly making money under favorable commercial conditions. In many cases it was found that the owners of the old establishments were willing to retire from business and to accept a fixed income upon their capital. To others the original investment could be reimbursed from the savings of outsiders

who became shareholders in the consolidated industries. The transfer of such considerable sums to the owners of the old plants, where they were paid in cash, added to the fund seeking investment, and thereby added to the capacity of the market for absorbing securities.

That this tendency to create securities has been overdone within the past few years is undoubtedly true. The inevitable operation of the law of supply and demand curtailed demand when the supply of capital available for such investments was absorbed. The process of creating new securities proved so profitable—or at least appeared so—that the demand was soon more than satisfied. Hence came the phenomenon of a mass of "undigested securities," which could no longer find the ready market of a few years before. The fault has not lain entirely with the character of the securities.

The fall in quotations for "industrials" on the New York stock market is not due altogether to impairment of confidence in the value of such enterprises, but is the

inevitable result of an excessive offer in relation to effective demand. That effective demand depends upon the supply of capital. The evidence of deficiency of capital in Great Britain is afforded by the heaviness of British consols, which carried them down from 112 in 1897 to 94 in 1899, and finally below 88 in 1903. It was not that confidence had been impaired in the willingness and ability of the British Government to pay interest in full on the securities as it became due, but the fact that new issues of such obligations increased the supply on the market beyond the demand for a safe security at the higher prices. To a like cause—absorption of the surplus capital in the market—may be attributed the fall in first-class railroad stocks, and the hesitation of the market to absorb new stocks and bonds of the most "gilt-edged" character.

Undoubtedly, also, in the case of industrial securities issued on the American market, the character of those issued has tended in many cases to become worse as

the issues have increased. This would not necessarily be the fact in each separate case, but would result from the natural tendency to first consolidate those industries which afforded the best economic justification for it. The first consolidations were the result of the pressure of economic necessity in order to escape forms of competition which had destroyed profits. They promised real economies in management and increased earnings, in order to commend themselves to the promoters and investors who took them up. When consolidation, however, had become simply an imitative mania, and the investor, tempted by the large profits, or apparent large profits, of the first combinations, became eager to buy their securities, it was inevitable that the quality of new enterprises of this character should progressively deteriorate. When the demand for new securities was small, it was necessary that they should be of the highest character to find a market; when the demand became apparently insatiable, it was natural that shrewd and sometimes

unscrupulous promoters should set themselves to provide a supply.

It might be said in a broad sense that the early consolidations were forced upon promoters and financiers by industrial conditions,—while some of the later ones were the result of the efforts of such promoters to create conditions which would afford them opportunities for "a rake-off." In an economic sense, the later process was putting the cart before the horse. When mushroom trust companies were created for the purpose of imitating the large profits of the older and more conservative companies, it was natural that they should greedily swallow any bait which promised large profits, without going behind the prospectus to inquire too closely into the solidity of the new projects, or even into the honesty of those who brought them forward.

But the public is to blame in such cases quite as much as misguided or dishonest promoters. If they pass by conservative companies and safe investments to seize upon glittering offers of speculative stocks

by mushroom institutions, who is to stay them or retrieve their errors, so long as those who delude them keep barely within the line of indictable fraud? It is the same old story which has been told many times in periods of expanding trade. The public fail to discriminate between those securities which are proper for trust investments and those whose low prices are determined by the very fact that they are speculative. Each successive generation in a period of prosperity and ascending prices seems to forget the fundamental rule of finance,—that the return paid upon a security is inversely to its safety. To those financiers who inculcate this rule they turn a deaf ear, and the latter are perforce compelled to drift with the current or see themselves stranded without clients or profits.

Every new form of financial organization has to pass through the test of fire. Experience is required to develop its elements of strength and weakness. When the principle of the stock company with limited liability was first recognized in

modern industry, Adam Smith declared that its use was limited to a few special enterprises like banking, which followed a settled routine. Every one has gotten away from that prejudice, but the ultimate capacity of the joint-stock system of organization is still untested. During the past century it has been extended to nearly every form of manufacture and to the complicated problems of transportation by land and sea. It contains, however, other possibilities which have not yet been developed. Among those which have recently been put into practice have been the consolidation of great industries, the leasing of one corporation's property to another, and the control of operating companies by companies holding their securities. Whether these new forms of joint-stock enterprise will be successful must be determined by the same test which has been applied to all other enterprises,—the test of experience.

It is not surprising that the first experiments have afforded results which in some cases are subject to criticism. This was

the case with some of the first joint-stock companies in their simplest form, and was so conspicuously the case with banking in our earlier history that the innocent use of credit in the form of printed bank-notes has not yet shaken off the prejudice resulting from these experiments. Even the corporate organizations of railways, with their issues of bonds and stock to create pathways through the wilderness, resulted in great losses in 1873, and nearly two hundred receiverships as recently as 1893. The London *Statist* has within a few months recalled to British investors that "in their early days many of the [American] railroads were over-capitalized much as industrial companies now are, but owing to their enormous betterment outlays for many years past, the water in American railway capital has now been in most cases effectively squeezed out, and the properties brought up to their book values."

But the joint-stock principle, the railways and the banks have survived the trials resulting from early errors, and are

now admitted by every one to be essential and beneficent parts of our economic machinery. Railway bonds and many railway stocks have reached a solid investment basis, superior to the storms of business disturbance which are sweeping over newer forms of enterprise. The older and larger banks and trust companies have also avoided the blunders of early days, and have kept their assets in a form in which they could be quickly converted into cash in case of need. The fact that deposits payable on demand should be covered by assets convertible on demand has been well learned by American bankers. Only the amateurs and the incompetents among bankers and trust-company managers have forgotten the famous distinction of Mr. Hankey between a mortgage and a bill of exchange. The more conservative of the New York trust companies in particular, making their advances exclusively on the best stock-exchange securities, with a margin of twenty per cent between the market value and the amount loaned, have not failed since

the first signs of a coming storm to husband their resources, to scan critically even high-priced collateral, and to throw the benefit of the doubt always on the side of conservatism.

It remains to apply to the industrial trust and the new forms of financial organization the lessons so well learned in the school of experience in railroading and banking. To obtain a given result by the greatest possible economy of capital and of effort is the secret of success in finance, in industry, and in competition in foreign markets. The Bank of England does the great business of the British banking system with a metallic reserve many times less in proportion to the transactions of the country than that of the New York banks and the Treasury of the United States. In the early days of England's financial primacy, the reserve proved insufficient, and English finance was all but wrecked. So it may be that our industrial combinations must learn the lesson of larger reserves and sufficient working capital before they are

planted on a solid basis; but in the end, even if they cannot realize the ambitious dream of putting an end to perturbations in industry, they are likely to vindicate their claim to increasing the productive efficiency and competitive power of our country.

It may well prove, also, that the principle of the operating company and the security-holding company, in spite of the fact that they give a minority of strong holders the power to dictate the policy of the corporation under control, may serve the public interest by bringing unity and concentration into management which has been incoherent and incompetent. The system of the security-holding company permits far-sighted men, for instance, who are willing to postpone present dividends to future wealth, to study the needs of a growing community, and to promote its growth by building traction lines in advance of the public demand instead of waiting for such a demand to become imperative. It enables the managers of a great trunk line to put an end to transfers

of passengers at State boundaries and local terminals, and to run the palatial trains across the continent upon harmoniously adjusted schedules which, far from being "in restraint of trade," have done more to promote it than all the laws for preventing combination or all the suits begun in pursuance thereof. The system of the holding company undoubtedly increases the power of the big financiers, but it enables them in many cases to go forward with far-sighted plans for meeting the certain expansion of local traffic in our imperial city, or of international traffic between the grain-fields of Minnesota and the markets of Asia, which would be difficult or impossible under the old system of petty competing organizations governed by the restricted vision of some neighborhood magnate.

The voting trust is another system of organization designed to the same end,—to put properties into the hands of competent and responsible persons, and to remove them, during necessary processes of reorganization, from the danger of

manipulative control through the stock market. One of the greatest evils of our system of an unfettered stock market is the opportunity which it affords to rich buccaneers to upset values and threaten the tranquil ownership of property. Against this danger the voting trust forms a safeguard. In thus making it easy to locate upon a few heads the responsibility for the conduct of great enterprises, the management of our financial projects follows the tendency toward the fixing of responsibility which has become the model under our best city charters, where the scattered authority of commissions and legislative bodies has been concentrated to a large degree in the hands of a single executive.

The concentration of banking resources, and the power to act resolutely in times of crisis, which is derived from coöperation among the banks and a few powerful leaders, are generally recognized to be among the most potent factors in our recent industrial progress and our present financial security. If the recent decline in the price of securities had found the

market depending upon a large number of banking institutions with small capital, indifferently managed, and divided by petty jealousies, it might have tumbled them over like a row of bricks, and made the declining market of 1903 a repetition of the panic experiences of 1873 and 1893. Combination has vindicated itself the world over in banking; it remains to be seen whether, after due experimentation, it will not also vindicate itself in railway management and manufacturing.

America has a great destiny to perform in the industrial development of the world. She can perform it only by applying to every part of the machinery of production, transportation, and exchange the principle of the greatest economy of effort to obtain the greatest sum of results. The opportunity for every man to rise by his talents from the lowest to the highest place, the right to reap and keep the rewards of one's labor without excessive taxation or vexatious visitation, the privilege of transferring property on the stock exchanges without the fetters imposed on such

transactions in Europe, and the freedom to extend new methods of economy and combination in trade and finance across the continent, untrammelled by local tariffs and State boundaries, are among the weapons which give our country its great advantages in dealing with older competitors. It is not surprising that, in the strenuous work of forging these weapons to their sharpest temper, mistakes have been made, capital has been lost, the subtile resentment has been aroused of those incompetent to meet the new conditions; but such errors are the almost inevitable incidents of a period of progress. They correct themselves in the furnace of competition better than they are likely to be corrected by paternal legislation, which is usually bungling and often ineffective.

A community which does not within proper limits encourage the enterprise of the promoter puts fetters upon the transfer of its capital to its most efficient uses and upon the development of its highest industrial efficiency. Upon the proper direction of capital rests the industrial de-

velopment of a nation. Everything which tends to hamper the transfer of capital from an industry which has ceased to be profitable, because perhaps it has been too widely extended, tends to prevent the direction of the capital of the country into the channels where it is most efficient. The work of the promoter in recent years has tended to increase this transferability of capital by providing a method for getting rid of useless plants without direct loss to their owners, and adjusting the productive capacity of an industry to the actual demand for its products. More than this, in the organization of a new enterprise, like the opening of a new mine, the promoter actually adds to the efficient wealth of the community by opening sources of income which were before untouched. As Professor Meade well says in his book already quoted:

"In the present scheme of production the resources and the money are useless apart. Let them be brought together, and wealth is the result. The unassisted coincidence of investment funds with investment opportunities, however, is fortuitous

and uncertain. The investor and the land or patent or mine owner have few things in common. Left to themselves they might never meet. But the promoter brings these antithetical elements together, and in this way is the means of creating a value which did not before exist, and which is none the less a social gain because much of it is absorbed by the promoter and the financier."

The new methods and the new projects are going through the test of fire to-day, and some of them are being consumed. The tests which weeded out the badly organized and incompetent of the early stock companies, which drove to the wall the "wildcat" banks of ante-bellum days, and which wiped out dividends and stock rights in badly managed railways, are now being applied to the new forms of organization which have been the growth of the past decade. But the stronger and better organized of these new corporations are likely to meet these trials without disaster, or to modify their methods to conform to the teachings of experience, until there remains to the financial world a valuable residuum of new methods for giving flexi-

bility to capital and promoting its transfer promptly and efficiently from the industries where it is not needed to those where it will render its highest service.

II

THE TRUSTS AND THE PUBLIC

THE discussion now going on in regard to the regulation of large corporations, popularly known as "trusts," would probably be more intelligent if there were a more careful definition of the objects sought and a more definite understanding of the interests to be served by such regulation. There has been so much of passionate declamation on the one hand and so much of strong resentment on the other that the true issues have been to a large extent obscured in a mist which the thoughtful voter would find it difficult to penetrate if he should be called upon to vote on the subject. It is obviously for the interests of those who have really anything at stake, whether as the promoters of important enterprises, as investors in securities, or simply as the

consumers of "trust-made goods," that all sides of the question should be fairly presented and dispassionately considered.

The biblical mandate, "Come now, let us reason together," should be given a sufficiently broad application to include a recognition of concrete facts as well as abstract principles. It has been one of the distinguishing qualities of the Anglo-Saxon peoples,—which has marked them off from their Latin rivals,—that they have not been too hasty to adopt abstractions as a rule of action. They have shown a respect for "vested rights," even when those rights have grown into abuses, which has deprived their political progress of such picturesque episodes as the abolition of the old calendar, the voting away of privileges in a night, and the tearing open of the sepulchres of kings, which marked the Revolution in France, but has contributed on the whole to their more solid progress in the difficult art of linking economic development and the security of property with government by universal suffrage.

In dealing with the problems growing out of new economic developments, there is no reason to doubt that the American people will in the long run proceed with the same sobriety, sanity, and respect for their real interests with which they have proceeded to the solution of similar problems in the past. With a presidential campaign at hand, however, care should be taken to guard against hasty judgments, and above all, against reasoning to an apparently sound conclusion from premises which are falsely assumed. If the premise is sound, that all large corporations are inimical by their very essence to the economic, political, or moral life of the nation, a means will be found for destroying them. If this premise is not sound, but if only certain phases of corporation management, and not all, are injurious to the national welfare, then care should be taken in removing the unsound timbers that that majestic fabric of our economic power, which makes us the admiration and envy of all peoples, is not weakened or brought down in ruins.

In clearing the ground of the rubbish of much of the current discussion, it is desirable that certain distinctions should be made as to the objects sought by further regulation of corporations. One of the distinctions which the advocates of further regulation may fairly be asked to make is, whether their essential object is the protection of the investor or the consumer. It is obvious that these two interests might be quite antagonistic. It is to the interest of the investor, in a narrow sense at least, to get as much from the public as he can by means of large profits and exclusive privileges for the corporations whose stocks or bonds he holds. It is to the interest of the consumer, on the other hand, to limit the profits of the investor and to restrict the privileges of the corporation whose products he desires to use.

From a broad point of view there is a certain harmony of interest even where there appears to be antagonism, since a far-sighted corporate management will seek, on the one hand, to keep profits

below a point which will create new competitors, and, on the other hand, will seek to steadily enlarge its market by offering products at prices which are attractive to consumers. These influences, however, are the result of natural economic forces whose efficiency in preventing abuses is denied by those who advocate further regulation of the corporations than that afforded by existing laws. From the standpoint of the advocates of regulation, therefore, there should be a sharp distinction drawn between legislation for the investor and that for the consumer, if any intelligent progress is to be made. It is rather remarkable that recent criticism of the corporations has turned more upon what the investor has suffered from the decline in values and the flotation of doubtful securities than upon the injury which has been done by corporate exactions to the consumer; yet, by a strange confusion of reasoning, the prejudice caused to the investor by these events, in the cutting of prices, the fall in values, and the collapse of weak concerns, instead

of being welcomed as bringing tardy justice to the consumer, is used as one of the weapons in the general crusade in the consumer's behalf.

That regulation of corporations by law is to a certain degree necessary and desirable, is a recognized principle of our legal policy. Corporations are the creatures of the law because their shareholders are dowered by the law with the privilege of limited liability and the corporations themselves are given the advantages of perpetual life. Heretofore, however, the several States have been left to regulate corporations as they saw fit, and their regulation has been in many cases eminently efficient. They have so far protected the holders of insurance by careful definitions of their rights that the varied forms of policies have been reduced to a nearly uniform income basis. They exercise the power of visitation over State banks, as the Federal Government does over national banks. In many cases, they collect special taxes upon corporate franchises and earnings, which would have

to be renounced if this form of taxation were adopted by the Federal Government. Such legislation has been the result of experience. It did not spring forth fully formed, with the birth of insurance companies and State banks. It has become most nearly perfect in those States where these institutions have attained their greatest development, and its history may well afford an index for the future to those who are not too impatient of the reasoned deliberation of Anglo-Saxon methods in dealing with such subjects.

If there is to be, therefore, further regulation of large corporations, and especially the extension of Federal control over State corporations, it will contribute something to clearness of thinking and precision in action if the ends sought—whether the protection of the investor or the protection of the consumer—are clearly defined and separately considered.

Taking up the subject from the side of the investor, it is obvious that his protection by law implies that he shall be protected against investments in securities

which have not the value they purport to have. It means additional guarantees that dividends which are not earned shall not be paid, and that proper provision shall be made by setting aside reserves in fat times for the payment of dividends in lean times. These are desirable objects, but they are already sought by the corporation laws of the States where corporate business is largest. It is a question whether the protection of the investor in the future should not proceed along the lines of his economic education rather than along the lines of new restrictions upon corporations. Just so far as the Government relieves the citizen of the obligation of looking out for himself, it promotes a condition of dependence upon the State which is detrimental to genuine economic progress.

Ample illustrations of this may be found in the history of corporation law in such countries as France and Germany. The French law requires any foreign corporation entering upon business in France to obtain from the French Consul in the

country where the corporation is authorized a certificate of its incorporation. The certificate means nothing as to the solvency and earning power of the corporation, but it puts upon paper corporations the stamp of the signed declaration of the French Consul that they are legally constituted in a foreign country. While such a circumstance does not mislead the intelligent financier, with ignorant investors the intervention of the French law has proved a positive aid to adventurers in perpetrating frauds, because of their implicit reliance upon the value of an official certificate.

It is hardly possible that any body of law, however minute and however restrictive, could protect investors against the consequences of ignorance in making their investments. The essential thing is not to hamper legitimate corporations by new laws, but to teach the public to judge investments with discrimination. It is not possible in a progressive nation for the law to forbid the owners of capital from investing it in enterprises whose se-

curities have not acquired the character of trust funds. Any such policy would mean that enterprise would come to a dead halt, for it would prevent rich men with money to spare from putting it into patents or enterprises promising great economies in production and benefits to the community, but not yet placed upon the solid investment basis of bank shares or railway bonds. The latter quality is acquired only by enterprises which have been subjected to the test of experience. Railway bonds themselves were an investment of a very uncertain character within the memory of many now living, but if the State had not permitted men with faith and foresight to invest in them we should be doing business still with the stage-coach and the post-road.

One of the primary lessons which the investor should be taught is the discrimination between different types of investment. He should learn that bonds have a prior lien over preferred stock and preferred stock over common stock. He should learn that these distinctions are

necessary to meet the requirements of different types of investors,—the holder of trust funds, who should invest only in bonds and tested preferred stocks; the man who is willing to take slight risks and therefore may invest in preferred stocks of slightly lower reputation; and the man who for the sake of possible larger gains, is willing and able to take large risks, and may therefore invest properly in the common stocks of untried "industrials" and undeveloped mines.

The investor should learn the lesson that he cannot reasonably expect all these qualities to be combined in one investment,—that the securities which are absolutely safe are not usually the ones which are sold the cheapest and from which the largest returns may be expected. If the thousands of people who have within the past three years invested in some highly speculative common stocks, and have seen their prices decline 75 per cent in the market, have been advised by competent financiers that such stock was a safe investment for trust funds or

for those who could not afford to lose, they have just cause of complaint against their advisers; but if they had possessed a pittance of financial knowledge they should have known that the common stock of an untested enterprise, quoted far below par, could not in the nature of the case possess the character of a trust investment. It is difficult to see how legislation could protect such a type of investors from the consequences of their ignorance.

A sound economic education would teach the public that high returns almost inevitably mean risk, and that the man who buys securities which have not reached the basis of trust funds should not invest more than he can afford to lose. In simple terms, speculation by people of small means should be discouraged, while sound investment should be encouraged. There is undoubtedly in America too much reckless and uninformed speculation, especially on margins. "One of the things which surprised me most," said an English guest at a dinner-

table in New York last winter, in response to a question as to what impressed him especially in the American market, "is the amount of business you do on borrowed money." He referred to the speculation on margins, which is so universal here among people of small means and which finds so slight a footing on the English stock exchanges.

It is likely to prove a task of Sisyphus to attempt to protect the public against foolish investments. Opportunities for investment will constantly assume new forms which will elude the most stringent law. The only thing which would finally extinguish speculation would be the reduction of all economic forces to certainties. This can never happen until economic efficiency attains its maximum development. It may attain this development in an ideal world, or it may attain it by the cessation of intellectual activity and enterprise in the existing world. The latter event—when inventions cease, no new enterprises are born, and nations begin living upon their capital, and falling be-

hind their more ambitious rivals—is what is called by economists "the stationary state." Such a state in America would be the antithesis of the conditions of to-day; but one of the most effective conditions for bringing it about would be undue restrictions upon American ingenuity and enterprise with the object of protecting the reckless and improvident.

Even in a stationary economic state, there would be alternating periods of business expansion and contraction. With such periods stocks would rise and fall. Even if new enterprises of merit were stifled by law or by lack of enterprise, fantastic projects would be conceived for absorbing saved capital, like "the tulip mania" in Holland and the South Sea bubble in England. All that can be done for the investor by positive law is to protect him against palpable fraud. He cannot be protected against himself if he chooses to embark in speculative enterprises. As President Roosevelt has so tersely said: "About all we have a right to expect from Government is

that it will see that the cards are not stacked."

The direction in which capital shall flow is determined by competition. Where it proves profitable it continues to go. From where it proves unprofitable it withdraws. Intervention by the State which seeks to determine the direction of the flow of capital is likely to do harm by fettering industry and diverting capital from its most productive uses. Laws regulating capital in the interest of the investor, when they go beyond legitimate protection against fraud, usually prove ineffective because they come after the evil which they seek to cure. They simply lock the stable-door after the horse is stolen.

Turning to another phase of the current discussion regarding the regulation of the trusts, we find much said in behalf of "publicity." "Publicity," in the minds of many, is the panacea which is to cure all ills by revealing to the fearless eye of the incorruptible official and to the sane, clear mind of the investor all the dark

spots in corporate management. In so far as publicity prevents palpable fraud and insists upon certain sound rules in the organization of new companies, it undoubtedly serves a useful purpose. The purpose served, however, is to provide accurate data upon which the investor may base conclusions as to the earning power of properties. Provisions for such publicity as this are found in the existing laws of most of the States. Railways file reports with the railway boards of the States through which they run, and local corporations in nearly every State are required to make exhaustive statements of their earnings and assets to State officials.

Would further publicity be of value to the investor who is careless or over-optimistic? This is a question which should be thoughtfully considered by those who attach importance to publicity. Under the English law "publicity" has been carried so far ever since 1862 that the representative of a yellow journal or any other curious person has had access for a

shilling to the registers of share companies with authority to ascertain the exact number of shares held by each member with the amount which he has paid for them or failed to pay; yet this calcium light of "publicity" turned upon the business of the modest and honest rich man has not prevented gigantic frauds by his dishonest rivals, repeated losses by reckless speculators, or the necessity of further tinkering the general companies' acts more than sixteen times in a generation, independently of other acts relating to special classes of corporations.

Would the man in America who proposes to take a "flyer" in "steel" or "cotton" be more likely than his English brother to be deterred or benefited by more publicity regarding those industries? The Steel Corporation already makes admirable reports quarterly and semi-official estimates of its earnings at much more frequent intervals. In cotton the Government makes crop estimates which come in conflict with many private estimates. The complaints and charges

of bad faith which these Government estimates engender are a suggestive hint of what might follow general Government supervision of industry.

If a man is determined to take foolish risks by buying speculative stocks when he cannot afford to lose, he is not likely to be stopped by anything short of actual prohibition by law. Does the demand for publicity, then, when submitted to analysis, mean a substitution of official judgment for private judgment? It is difficult to see what else it means, if the thoughtless speculator who hopes to make money by buying some stock "for a rise" is to be prevented from doing it when he is likely to suffer a loss. Shall his right to "take a flyer" in cotton be subordinated to the judgment of the chief of the Bureau of Statistics of the Department of Agriculture that the crop figures do not make cotton "a good buy"? If so, State socialism is enthroned at a bound in our political system.

Unfortunately, human foresight has not yet reached the point where it can be

determined with certainty in every case whether a given course will bring a profit or a loss. The man who first invents the formula for determining this point will hold the world in the hollow of his hand. For him and for all to whom he confides his formula, speculation will cease, because it will cease to be speculation.

Putting aside, then, the question of official control over private action, the residuum of the question seems to be, whether greater publicity than exists to-day would protect the reckless speculator against himself. Does such a man lose money because he cannot get information which he honestly seeks? When he gets a "tip" to "sell Pennsylvania," does he proceed at once to examine all the available data regarding the finances, policy, and future earning capacity of the Pennsylvania Railway? These data exist in the most accessible form which is possible, in official balance sheets printed broadside in the newspapers, and in elaborate detailed reports of operations, assets, train mileage, and earning power per mile. If

these data are neglected where they are now made public, would they be any more carefully studied, except by experts, when the mass of material to be examined was increased?

Undoubtedly publicity in certain cases where there is now secrecy would benefit a few, but it would be the few who now profit most by careful study of values and by shrewd employment of their resources. But it is not these men who are calling most loudly for "publicity," and it is not they whom it is in the heart of the agitator against the "trusts" to serve. To "the man in the street" it is doubtful if publicity would be worth a dollar in increased profits or diminished losses, — whether, indeed, he would not be tempted into greater recklessness by the assurance that the paternal hand of the Government had for his protection been laid upon every corporation brought under Federal law.

It is worthy of serious thought, whether in seeking the protection of the individual, there is not danger that we should enter

on the narrow path of some of the continental countries, where interference by the State with corporate activity tends to stifle invention and to drive away capital. In France down to July, 1903, it was impossible by law to divide the shares of a corporation into common and preferred. Shares issued for anything but cash cannot be sold on the exchanges for two years. The securities of foreign corporations cannot be listed or even publicly sold in France without the payment of taxes which practically exclude them from the Paris bourse. As the result of such restrictions, the French masses have acquired in financial matters a degree of dependence upon the Government which has tended to take away their confidence in themselves. By the confession of thoughtful Frenchmen, capital tends to leave France for markets where it is more free, and the persistent thrift and intelligence of the French people does not find the productive outlets at home which would be found under a system of greater economic freedom.

For the protection of the investor, therefore, it is doubtful whether new laws would have value unless they stifled all the qualities which are giving America her predominance in the world of finance. The protection of the consumer presents another side of the problem. Will he be benefited by severe repressive legislation regarding investments and by giving publicity to all that is done by corporate authority? From a narrow standpoint it may be conceded that it is possible to take something for a limited time from the capitalist and the producer and hand it over to the consumer. The French National Assembly was able to take property from the nobility and turn it into the coffers of the nation. France and Mexico have been able to confiscate the property of the church and appropriate it to public uses. Italy, some years ago, converted a five per cent bond into a net four per cent obligation by imposing a tax of twenty per cent upon incomes from securities; but the stock market promptly responded by reducing Italian securities

to a price corresponding to their diminished net return. So it might be possible for the property of the Standard Oil Company or the Steel Corporation to be seized by the State or practically confiscated by excessive taxation and turned into the public treasury. But it is not such extreme measures that it is necessary to discuss. It is obvious that the attempt by the Government to fix maximum prices for commodities or to diminish by taxation the profits of industry, would yield only temporary results, because properties would be sold by their owners or abandoned when it became impossible to run them at a profit.

The essential question in regard to the consumer, therefore, is whether the community as a whole will secure in the long run a real economic gain by adopting restrictions on corporate activity or on the forms of investment. This is the crux of the problem,— whether the consumer will be benefited in the long run by measures which tend to repress inventive skill and enterprise by diminishing the profits of

those who possess these qualities. The difference between a progressive nation and a receding one is chiefly the intellectual activity and inventive genius of the former. These qualities must, even in the most enlightened States, be the rare property of a limited number of individuals. In America, fortunately, the opportunity to enter their ranks is open practically to all men. But even under these favorable conditions the number of men who rise above the treadmill of daily routine, whose minds reach out to devise new mechanical appliances, great economies in railway and industrial management, and financial projects which carry out these economies, must ever remain a small fraction of the whole community. This being the case, the vital question is whether it is desirable to encourage the efforts of these men or to discourage them.

How mighty is the influence of these few minds,— the inventors, the captains of industry, the resourceful authors of new financial combinations,— upon national economic progress is realized by

few. Plodding industry, which must ever be the virtue of the mass of men, accomplishes much; it is the foundation upon which all else is built. But plodding industry alone does not utilize new forces; it does not harness Niagara; it does not keep a nation at the forefront in the race with industrial rivals. The Chinese and several of the Latin peoples are perhaps to-day the equals, if not the superiors, of Americans in their willingness to work and save; but these qualities are not sufficiently supplemented by those great powers of invention, initiative, and combination which give dominance in the modern world.

The few who consecrate themselves to the development of these higher qualities do it often at the sacrifice of that ease of mind and domestic comfort which is the happy ideal of the normal man. When the clerk, who is content with his salary and his home, quits work at four or five o'clock, he usually leaves behind him all thought of his occupation, and he often leaves behind him, still busy at his desk,

the captain of industry from whose waking and sleeping hours are never absent the worry over competition, the mental struggle for new methods of giving economy and efficiency to labor and to the distribution of capital.

It is the numbers and the success of these men,— their ability to work unfettered in a free economic field,— which determines whether a nation shall be great or little, whether it shall advance or recede,— whether its cities shall house throbbing life, like London or New York, or only gloomy monuments of a buried past, like Carthage, Tyre, or Rome today. Great is the function of creation,— the greatest power given by God to man. It is a power which is rarely lodged in the State, and which, if assumed, usually brings forth ill-formed, impotent, hermaphrodite shapes. It is a truth which should never be obscured, that the utmost exercise of power by the modern State rarely results in creation. It may appropriate the creations of others; it may sometimes make wise use of their

creations; but usually its power, even when wisely used, is simply repressive and destructive,—it is not creative. Jealously, therefore, should its encroachments be watched, that it may not stifle or repress that creative power which is the seed of the growth of nations.

It should not be forgotten that, palpable fraud aside, these men with the genius for invention and combination cannot succeed themselves without giving something to the community. Even some of their operations which seem questionable cannot be well restricted by law unless their entire activity is to be restricted. To issue common stock which is not as well secured as preferred stock or bonds is not fraud. On the contrary, to the merest tyro in finance the fact is proclaimed by such an issue that it does not claim to be as good as preferred stock or bonds. Those who buy it are not entitled to much sympathy where they enter the stock market simply as gamblers and not even as intelligent speculators upon market conditions, in the hope that they

will profit by some other man's blunder and will put in their own pockets an unearned increment which he has lost.

The State cannot correct such folly as this except by interference which would stifle enterprise. The men who conceive such enterprises and who have the capital or the courage to take risks are the ones to whom the profit or the loss should accrue. If other men having money which they can afford to lose see fit to share with them the risks of loss or the possibilities of profit, there is no reason why the law should intervene. Only by taking such risks does the world make progress. The man who invents something which does not involve a real economy,—whether it is a mechanical device, a parallel railway line or an inflated and useless "merger,"—cannot take anything for himself from the community as a whole if his project involves no net gain to the community. If there is no net gain, he loses what he invests in the enterprise. If there is a net gain, then the question reduces itself to this,—

whether its present distribution shall be so changed that the public shall get a larger share of the fruits of this man's thought and risk and he shall get a smaller share. Under the least favorable conditions, the public, as consumers, cannot fail to obtain some share, since it is necessary to offer them something more economical than they have had before in order to induce them to accept the thing which is new.

If a man invents a new engine which is more costly and less economical in operation than the old ones, no railway company will buy it from him, however skilful and interesting its mechanism. If a shopkeeper offers a new device for raising bread, no housewife will buy it more than once if she finds that it costs more and yields poorer results than the device she has been using. The new device must be either offered at a lower cost or with a higher degree of economy and efficiency than the old in order to find a market. The principle may seem less simple when extended to the forma-

tion of stock companies and the floating of preferred securities, debenture stock, and convertible bonds, but its essence is the same. The man who perfects a new system of railway management or a new financial combination cannot profit in the long run if the enterprise itself does not involve some increase in the producing power of the community or some economy in the use or distribution of capital.

For the consumer, therefore, it is doubtful if further State intervention would bring permanent benefits. Spoliation might profit him for a moment, but only to make his last state worse than his first by suppressing the spirit of improvement which is the ultimate source of progress. What the State should do, if it goes beyond its present functions, is to give an economic education to those who desire to enter the financial world. It should teach them the fundamental principles that the dividends of an enterprise are inversely to its safety; that speculation on margins should only be indulged in when one has money to lose; and that

investments should be made only after careful study of the value of properties from the sources of publicity which already lie open to him who cares to read them.

Upon the question whether larger powers to control corporations should be conferred on the Federal authorities there are also two sides. With the unification of national life and the wiping out of distances by the railway and the telegraph, there is much to be said in favor of uniformity in business methods and control. Uniformity always has a charm for the type of mind which is severely logical. England has a general corporation law. Issues of new stock and bonds are recorded at Somerset House and the aggregate corporate capital of the nation can be ascertained there. But in England corporations are not to any appreciable extent the playthings of politics. The laws regarding corporations are largely influenced there by the crystallized opinion of experts. Rarely, if ever, since England attained her commanding industrial position has the question of con-

trolling corporations been a subject of division between Lombard Street, where the corporations are financed, and the agricultural interests of Northumberland or Devonshire. Never perhaps in modern times has an organized campaign been made for the regulation of corporations against the opinions of "Lombard Street" and upon the ground that those opinions were unworthy of consideration.

If similar conditions existed in this country—if the views of "Wall Street" on changes in the corporation law were always attentively listened to at Washington and were accepted as a guide in framing legislation, subject only to the modifications suggested by disinterested economic experts—then perhaps legislation which was at once sane and strong might be secured from the fountain-head of Federal power. There is hardly any more drastic legislation in the world than that of the English companies acts against the formation of fraudulent and unsound companies; but it is legislation intended for the protection of the investor, with

few traces of a purpose to hamper legitimate companies in the conduct of their business with the end of regulating the prices of their products. This sort of regulation, which in Great Britain has accompanied centralized control of corporations, is hardly that which appeals to those who seek to diminish corporate power in the United States. The last thing in the world to which they wish to give weight is the opinion of Wall Street or even of the anathematized students of abstract economics.

While it does not perhaps follow from the example of Great Britain that subjecting corporations to Federal control would give them more power over legislation than they now possess, there are forces which might be brought into play which would tend towards this result. There is reason to fear also that this influence would not be felt in the same direct and open way as in Great Britain, where the influence of "the City" is considered legitimate and goes unremarked, but that a less open and more questionable power

would be acquired by the monied interests when they had to deal with a single legislative body, instead of dealing as they do to-day with forty-five.

The concentration at Washington of all power over corporations, including the granting of franchises by law, their regulation by executive boards, and their interpretation by Federal courts, would make possible a crystallization of the power of corrupt influences such as has never before been possible in the history of the world. It would surpass in some ways the concentrated power of corruption which was practised at Rome when Jugurtha was able to declare it a city where everything, even national honor, was sold, and where republican government finally perished because of the enormous bribes which were offered to the voters by the generals and speculators who had appropriated the spoils of the world. The advocates of sweeping changes in the control of corporations should at least measure the possibilities of danger in transferring to the Federal cap-

ital the great forces of corruption which make our city governments in many cases the plague-spots of our political system and which make State Legislatures too often the tools of those who seek to buy great franchises.

Public opinion, if concentrated upon Washington, instead of diffused over forty-five State capitals, would undoubtedly break out at times in resentment against some glaring abuse; but would it be able to follow all the sinuous paths of corrupt influences through committee-rooms and executive offices? Men in public office are only human. If the prospect of a few thousands going to favored contractors was sufficient recently to seduce the virtue of several of the underpaid heads of bureaus in the Post-office Department and to permit them, through complacent collusion, to carry on frauds for years without discovery, what would be the influence upon a bureau of corporations of projects involving millions,—where the change of a comma or a phrase, even a not unreasonable delay in making

a decision,—might enrich a corrupt or weak official, with hardly the possibility of detection?

Every financier knows how important are what seem to be most trifling things in determining the value of a franchise or in getting ahead of a competitor. If a comfortable fortune were the compensation sometimes attainable for merely delaying or hastening a decision, who shall say that Federal officials at Washington, with salaries ranging from $2500 up to $4000, for the most exacting and responsible duties, would always be impervious to such temptation? They would hold in their hands a power of extortion such as has never been surpassed.

How serious an obstacle may be interposed to corporate plans even by delay is shown by the long litigation over the United States Steel bonds which were issued in exchange for preferred stock. It was a commendable act on the part of Mr. Morgan to determine to resist the buccaneers who undertook to check the plans of the corporation by "strike suits,"

but, in making the decision to fight rather than to pay, he probably condemned the corporation by the decline in the value of the bonds between the date when their issue was first proposed and the date when the decision of the courts finally permitted them to be put upon the market, to a loss of many millions.

When to the risk of individual corruption at Washington came to be added that of political corruption, the dangers lurking in concentrated Federal control of corporations would be even more serious. The power to assess the Federal officeholders has been availed of more than once to fill the campaign chest of a party in office. If this power of assessment could be extended to the great corporations of the country, under the threat that they would get too much "publicity" in its most harassing form if they did not contribute, representative government would be subject to a menace greater than any it has yet encountered since it was born in Great Britain eight centuries ago in the struggle between King and Parliament.

A party once installed in power, using without scruple its ability to levy contributions upon the corporations, and to distribute these levies like the Roman corn-grants, as gratuities among the poorer voters, would be a self-perpetuating body more absolute, for a time at least, than the most absolute of voting trusts. For the latter operates under the law and subject to the law, while the former would be above all law or fear of law except that of the paying power of its victims. The American people should at least be very sure that the evils to be cured are greater than those which the remedy itself would bring, before they turn with too light a heart to so portentous a change in the constitutional system of checks and balances established by our fathers, with blood and prayer, that ours might be a Government of laws and not of men.

The considerations which are presented here do not constitute an argument against intelligent discussion of further legislation on the problem of the corporations. Within the States the corporation laws

can probably be improved in many cases in the interest of the investor. In the nation perhaps some simple laws might be enacted for the protection of the consumer without disturbing the rights of the shareholder. It would be as idle for the shareholders in corporations to claim that we are already living in an ideal world as it would be for their critics to seek to go back to the time when limited liability was almost unknown and when safe investments were confined to Government bonds.

Few will contend that we are living in a world in which economic forces can be trusted to work out absolutely unfettered by law those economic harmonies, perfect as the music of the spheres, which were the dream of Bastiat. What is here written is set down simply to promote intelligent discrimination in the effects of proposed legislation, careful weighing of the hidden dangers as well as the obvious results of extending Federal control too far and too rapidly, and dispassionate consideration of all aspects of the great problem

of best protecting the individual American without impairing his freedom of thought and action and his right to the proceeds of his labor. There should be clearer thinking, less blind hostility to wealth, whether in individual or corporate form, and absolute definitions of what is sought by new measures, whether simply protection for the investor or the consumer or the destruction of industries and property. Those who are not impelled by the latter purpose should take care not to be made cat's-paws by those who are.

If momentary prejudice and desire for political capital are excluded from consideration, it is at least questionable whether the time is ripe for new legislation of a drastic character in regard to corporations. It is apparent that important interests are timorous as to the effects of such legislation upon business and investments. Whether they are right or wrong in this timidity, it may fairly be said that the burden of proof in favor of any specific Federal law should be put upon those who advocate it.

Business interests should not stand in the way of the national life or well-being. Where a clear need exists for legislation which is injurious or dangerous to them, those interests must give way. Their willingness to submit to such a sacrifice has been shown on many occasions. To name but one, in 1861 the associated banks of New York willingly came to the aid of the Government when a public loan could not well be floated and acceded to the demand that they should pay the instalments of their temporary loan into the Sub-treasury in coin instead of by the usual methods of transferring credit, although they well knew and emphatically declared that in submitting to this ill-advised demand of Secretary Chase, they were impairing their coin reserves and inviting the suspension of specie payments with its Pandora's box of evils.

If a similar necessity exists to-day for Federal legislation inimical to business interests, those interests should give way; but if there is no such clear necessity, and if the remedies for supposed evils are in-

choate and their results are dubious, it is not apparent why legislation should be insisted upon pending careful consideration of the entire subject in all its bearings, economic, political, and financial, including observation of like experiments in other countries. When ills assail the State, her best citizens are bound to seek for remedies; but when such remedies are proposed, the burden should lie upon their proposers to prove that they are real remedies and not quack ones. In the absence of a great and present menace to the national life, they should be adopted only after they have been carefully weighed by sane and temperate men and their benefits in their minds clearly and greatly outweigh the risks of change.

It is delicate work to experiment with industry. Business men and financiers are trained through life for such work. They must by the nature of their occupation make experiments and take the consequences of their blunders and their discoveries. It is doubtful if Government officials can make these experiments more

skilfully. If tempted to use their great powers rashly, without fully weighing the consequences, they should reflect that

> "It is excellent
> To have a giant's strength ; but it is tyrannous
> To use it like a giant,"

when by so doing they may arrest the wheels of industry, spread terror and paralysis through the world of trade and above all stifle and pervert that fine spirit of foresight, initiative, and intelligent daring which are the distinguishing traits of the American man of business, and have made possible the imperial progress of our country during more than a century of internal industrial freedom.

III

THE FUNCTION OF THE STOCK AND PRODUCE EXCHANGES

ONE of the most persistent of the hallucinations which prevail among people otherwise apparently lucid and well informed is the conception that operations on stock and produce exchanges are pure gambling. A moment's reflection, it would seem, might convince such persons that a function which occupies so important a place in the mechanism of modern business must be a useful and necessary part of that mechanism; but reflection seems to have little part in the intellectual equipment of the assailants of organized markets. Only recently I picked up a book purporting to treat of the subject of ethics, and found this remarkable passage:

"If, instead of betting on something so small as falling dice, one bets on the rise and fall of stocks

or on the price which wheat will reach some months hence, and if by such betting one corners the community in an article essential to its welfare, throwing a continent into confusion, the law will pay not the slightest attention. A gambling house for these larger purposes may be built conspicuously in any city, the sign 'Stock Exchange' be set over its door, influential men appointed its officers, and the law will protect it and them as it does the churches. How infamous to forbid gambling on a small scale and almost to encourage it on a large!"

The writer who undertook to discuss the stock exchange in that manner in a book on ethics might very well have devoted himself less earnestly to the smaller refinements of ethical definition and reverted to the ancient maxim, "Thou shalt not bear false witness against thy neighbor." What he says is a hodgepodge of misconceptions. If it be true that betting on the rise and fall of stocks be gambling, as it undoubtedly is, then what follows has no relation to this first suggestion. To one having any knowledge of the subject-matter, the two parts of the first sentence are inconsistent with each other and mutually destructive. Pure betting is done

in bucket shops, is of no use to the community, is destructive to the morals and pockets of young men, and cannot be too severely censured. But such betting is not carried on in buildings bearing the sign "Stock Exchange." It has nothing to do with the legitimate processes of the exchanges. Moreover, one cannot corner the community on any "article essential to its welfare" by betting in bucket shops. He may perhaps do it within certain limits by actual transactions on the produce exchanges, because they involve the right to demand delivery. If it were true, however, that no such deliveries were contemplated or could be made, as is usually the case in bucket-shop gambling, it would no more be possible to corner the supply of wheat by betting on its future price than it is possible for a politician to carry the election his way by laying heavy odds on his candidate. His bets would not make votes, and merely betting on the prices of a commodity would not influence the supply.

The fact that such confusion of ideas

prevails, and that the stock and produce exchanges continue to be looked upon by many good people as a sort of adjunct of Monte Carlo, justifies an occasional restatement of the essential part which these exchanges play in the mechanism of business. To take the subject up from an elementary standpoint, it is well to say a word regarding the function of stock companies. The discovery was made long before our time that a piece of property or a new enterprise could be given mobility and divisibility by putting the title to its ownership into transferable shares. The creation of share companies enables the small capital of individuals to be gathered into the large funds necessary to build factories and railways. It divides the risk of an undertaking among many persons, and places the enterprise beyond the accidents of a single human existence by giving it a fictitious body dowered by law with perpetual life.

To give mobility to the shares thus created, it is necessary that they should have a market. It would be compara-

tively useless to divide an enterprise into shares if there were no means of transferring these shares readily from hand to hand. Therefore, a market for the shares and bonds issued by such enterprises is one of the vital necessities of their creation. Such a market is afforded by the stock exchange. The fact that the stock market is sometimes abused by people who go into it in a gambling spirit, who know nothing of its purposes, and who are incapable of understanding the mighty influences which dominate it, is no reason for treating it as a harmful excrescence on the body politic. Railways have not been abolished because a locomotive runs over men occasionally and kills them; banks have not been abolished because one occasionally suspends; and if enlightened judgment had been used, legislation would never have been enacted in Germany and seriously considered in other countries for hampering the operations of the stock and produce markets.

It is not proposed in this article to deal with the abuses which have sometimes

occurred through the manipulation of organized markets for improper purposes. It is proposed only to set forth the fundamental principles which prove the value of these markets to modern society and, therefore, afford their reason for being. The wrongs which have been perpetrated on the exchanges have come largely from perversion of their essential functions as the public mirror of values. It has been the dream of great manipulators to warp this mirror so that it would mislead the public to their own profit. The success which such manipulations have attained has, however, been greatly exaggerated in the public mind. It is truthfully declared by Courtois, in his *Traité des Opérations de Bourse et de Change*, that a fictitious movement, even on the part of the most powerful operators, cannot overcome the natural tendencies of values, and that the most that can be accomplished is to sometimes hasten or retard slightly the certain effect of a foreseen event.

The fundamental function of the exchanges, as already suggested, is to give

mobility to capital. Without them the stock and bonds of the share company could not be placed to advantage. Nobody would know what their value was on any given day, because the transactions in them, if they occurred, would be private and unrecorded. The opportunities for fraud would be multiplied a hundredfold as compared with the publicity which is given under present conditions to the least movements on the stock exchange. The mobility for capital afforded by the limited-liability company would be meagre and inadequate if the holder of its bonds and shares did not know that at any moment he could take them to the exchanges and sell them for a price. He cannot be misled as to this price, because every newspaper in the land, if the security is one of importance, gives him each morning the value which it possessed the day before in the markets of the world. The holder of it thus knows what the average judgment of hundreds of men is upon the value of that security. If it were not thus quoted, he would have to

rely upon the judgment of a few people, expressing their opinion privately and perhaps interested in misleading him.

The publicity which prevails in stock-exchange quotations gives the holder of a security not only the direct benefit afforded by such publicity for the moment, but gives him, free of charge, the opinion of the most competent financiers in the capitals of Europe and America. If they were dealing with him privately, instead of through organized markets, they might withhold the information which years of study and observation of railway properties and industrial enterprises have put in their possession; but when they go into the market and bid a price for securities, by that very act they give their advice free of charge. That quoted price stands as a guide to the most ignorant holder of these securities as to their value in the present and their probable value in the future.

The second benefit of organized markets is in affording a test of the utility to the community of the enterprises which

solicit the support of investors. The judgment of experts is there expressed, through the medium of price, on the utility of the object dealt in. If a railway is built in the wilderness of Manitoba and proves unprofitable, the investor does not need to hunt up people in Manitoba to ask how much freight and how many passengers it is carrying; he has only to look at the quotations for its bonds or stock on the New York Stock Exchange to know at once what is the judgment of experts on its value as a commercial enterprise. The prudent investor does not buy stocks which are declining, unless he has confidence in their future value. He withholds his capital from that type of investment. If he finds that the bonds or shares of cotton mills are generally declining on the market, he makes up his mind that there is no further demand for cotton mills, and does not snap at the prospectuses which ask him to invest in them. If he finds that certain railway securities are persistently declining, he concludes that they have acquired too high a price in

relation to the return which they pay, and that there is no need to increase railway equipment in their localities by offering capital for new railway shares.

All this information is put before the investor in a simple table of figures, which any man may read, as a result of the modern organization of the stock market and the publicity of what is done there. It would be practically unattainable by any other system. Thus through the publicity of knowledge and prices, the bringing of a multitude of fallible judgments upon this common ground to an average, there is afforded to capital throughout the world an almost unfailing index of the course in which new production should be directed.

Suppose for a moment that the stock markets of the world were closed, that it was no longer possible to learn what railways were paying dividends, what their stocks were worth, how industrial enterprises were faring,—whether they were loaded up with surplus goods or had orders ahead. Suppose that the informa-

tion afforded by public quotations on the stock and produce exchanges were wiped from the slate of human knowledge. How would the average man, how even would a man with the intelligence and foresight of a Pierpont Morgan, determine how new capital should be invested? He would have no guide except the most isolated facts gathered here and there at great trouble and expense. A greater misdirection of capital and energy would result than has been possible since the organization of modern economic machinery. Mr. Morgan or any other capitalist might be expending millions of dollars in building new railways or cotton mills when there was no necessity for them, while a hundred other industries beneficial to the public were stagnant for lack of capital. There would be no safe guide as to whether the world needed more railroads and fewer cotton mills, or more cotton mills and fewer railroads. Great sums would be wasted in bootless enterprises, which would prove unprofitable and carry down their owners to ruin. All the capital

represented, all the labor, thought, foresight, and inventive genius involved in them, would be sacrificed to the lack of an effective public organ for pointing out the direction in which capital was needed.

But to-day the organization of the stock market affords a register of values so sensitive that its very sensitiveness and accuracy are causes of thoughtless complaint. Men who plunge into the stock market without knowing its laws, and imagine that because stocks are rising they will always rise, complain because this sensitive reflector of values responds suddenly to some distant and unexpected event by a decline in prices. Perhaps in the Orient there are threatenings of war between two great powers, which would unsettle the relation between production and consumption; or in India there is a crop failure, which will influence the price of silver, and react upon the finances of America.

It is true, no doubt, that the stock market sometimes seems unduly sensitive to these widely separated and isolated events, but if one looks to the fundamental

conditions which govern economic society, it must be clear that it is better that it should be too sensitive than not sufficiently so. It is better that any rumor of war, with a threatened cessation of production and consumption, should be reflected on organized markets than that people should go on recklessly investing capital in enterprises which may afterwards prove unproductive. The stock market is the great governor of values, and the determinant of the relationship between production and consumption,—the guide which points the finger as to where capital is needed and where it has ceased to be needed.

The very sensitiveness of the stock market is one of its safeguards. Again and again it is declared in the market reports that certain events have been "discounted"; that the effect of the death of President McKinley, or promised peace between Great Britain and the Boers, has already produced in advance its natural influence on the stock exchange; and when the event actually happens, it results in no such great disturbance to values

as was expected. Is it not better that this discounting of future possibilities should occur,—that the effect of a given cause acting upon the market should be felt by graded steps instead of coming like a cataclysm? Is it desirable that capital and production should march blindly to the edge of a precipice and then leap off, instead of descending a gradual decline,—that a certain security, instead of falling by degrees, should fall thirty or forty per cent on the occurrence of some foretold event?

This foreseeing and discriminating calculation of the effects of coming events, known as "discounting" of the market, is one of the most useful functions of the exchanges. It enables the man who holds a given security, and sees that it is falling in value, to convert it into money without losing enough to be ruined. It enables the prudent man, who believes that an event will not cause the disaster which some anticipate, to hold on to his securities and even to buy those of the frightened and more excited.

Consider for a moment the effect of abolishing the produce exchanges and leaving events in the wheat and cotton market to have their full influence when they occur. What would be the effect upon the farmer? Instead of being able day by day to trace the course of wheat and cotton, to learn what supplies were coming upon the market and what the effect upon prices would probably be of the crops of the world, he would be at the mercy of every travelling factor, of every unscrupulous representative of some big commission house who could get his ear. He would be told by them that crops in Europe were enormous, that wheat and cotton were going down, and he had better take the price which they offered to-day. Thus he might be misled into selling at much less than the fair price of his crop. With no public knowledge of present or probable future events, he would be helplessly at the mercy of every idle rumor.

But to-day, if a cotton factor or unscrupulous agent of a commission house

tries to mislead the farmer, the farmer has only to turn to his daily paper and say, "There is the judgment of all the world upon the present value of my crop and upon its future value." If he has reason for not accepting that judgment, he is free to disregard it, but in any event he is not the plaything of misconception and false representations regarding the average opinion of other experts interested in the same commodity.

There is nothing, perhaps, more valuable to society than this power of the produce exchanges to discount changes in production and consumption of the great staples of food and clothing. The fact that future wheat is selling high, that there is a general belief that the world's crop is deficient, acts not only upon the farmer and dealer in this commodity, but also in a certain degree upon the whole community. Prices are likely to rise, the community becomes more economical in the use of the product affected, and the scanty supply in existence is husbanded during the period intervening before the harvest-

ing of another crop. If it were not so, people would buy at low prices while the crop was diminishing, and the community might suddenly face a famine for which it had made no preparation. The operation of the produce exchanges in thus discounting the future, by gradually raising prices to meet a scanty supply, or gradually letting them fall to meet an excessive supply, is beneficial not merely to producers and consumers, but to the community as a whole.

It matters little whether physical delivery of the products dealt in is made in all these cases or not. The action taken by speculators, so called, in buying and selling wheat and cotton for future delivery is simply the expression of their judgment as to certain future contingencies. They are willing to pay for errors in that judgment out of their own pockets. If, when the time comes at which they have agreed to deliver a certain quantity of wheat or cotton, the price has gone higher than the price at which they sold, they are bound to make the delivery or pay the difference.

But what does it matter which course they pursue?

The broker is only the intermediary in any event. If he has agreed to deliver 1000 bushels of wheat for $1000 on a given date, and the price rises to $1.20 a bushel, he and every producer know that he can obtain the wheat only at $1.20 a bushel, or 1000 bushels for $1200. If it is mutually convenient for the broker to pay the buyer the difference in cash which will enable the latter to buy the wheat at the net cost which he contracted for, it comes to exactly the same thing in the end as if the man who had given the order insisted upon a physical delivery of the wheat by the person who promised him future delivery. The buyer has simply been insured. Having contracted to receive a certain quantity of wheat for $1000, he gets it at that net cost to himself. The broker acts as insurer by paying the difference between the actual present price and the contract price made with the buyer. The latter is protected by his purchase for future delivery against the

risk of a rise which he foresaw. If, on the other hand, the price has fallen to ninety cents per bushel, it is the same to him if the seller accepts ten cents per bushel as the price of the insurance he granted and sends the buyer into the open market for his wheat. In either case the buyer obtains the wheat at the price he was willing to pay when he originally bought, and he has been insured against fluctuations of price in either direction.

The produce exchanges thus afford a form of insurance. They enable a man with contracts to execute in the future to ascertain to-day what will be the cost of his raw material in the future, and to know that he will get the raw material at that cost, even though it may rise in the open market above the price which he could afford to pay for it in view of the price at which he has contracted to deliver his finished products. Prudent dealers in great staples go into the market and buy and sell futures in such a way as to protect themselves, just as the prudent man of family goes to the insurance company

and pays a premium in order to get a guarantee that his family will be protected against what may occur through the failure of his capacities, his disability, or his death.

In the language of the critics of the exchanges, it might be said that the man taking insurance bets with the insurance company that he will die sooner than their mortality tables indicate, and thereby make a profit for his family. The operation is more like betting than transactions on the exchanges, because insurance cannot alter the length of human life. It is simply a speculation on what life will be. But society sanctions insurance, because it distributes risks among those who are willing to assume them and who have made calculations which lead them to believe that they will not on the average be losers by their transactions. That is to some extent the character of legitimate dealings on the produce exchange. The fact that physical delivery by the particular individual making the sale is not insisted upon has no bearing upon the case.

Physical delivery is not insisted upon in a hundred transactions which do not fall under the criticism of persons like the writer on ethics quoted above. If a retail coal dealer in July agrees to deliver to a patron in December ten tons of coal at a certain price, he probably does it on a purely speculative basis. He has not on hand the coal with which to fulfil his contract when the time comes. Does he commit any crime against the social order if he transfers the order to the shipping company and directs them to make the delivery direct from the cars to the purchaser? Can fault be found with the fact that the retailer does not insist upon the coal passing through his hands, involving extra handling and expense, in order to avoid the charge of indulging in a speculative transaction?

Such an operation is typical of what is happening constantly on the stock and produce exchanges. Physical delivery is made to the people who want the products. Between intermediaries the transactions are cleared against one another.

The manufacturer of flour who has gone into the exchange and bought and sold futures in wheat, in order to protect himself against an undue rise in that product after he has made his contracts to deliver flour, knows that all the wheat he desires will be delivered to him. He simply clears his contracts at one price against those at another, in order to get the exact amount he wants without being obliged to receive the excess physically on the one hand, and deliver it over to somebody else on the other. It is the same principle of clearing which runs through banking transactions and through every account at a store where transactions on two sides are concerned, and it cannot properly be contended that there is necessarily anything speculative or of the spirit of gambling inherent in the nature of such transactions.

Another important influence of the stock exchanges in particular, and to some extent perhaps of the produce exchanges, is that which they exert upon the money market. The possession by any country of a large mass of salable securities af-

fords a powerful guarantee against the effects of a severe money panic. If in New York there arises a sudden pressure for money, so that confidence becomes impaired, and people having contracts entitling them to future or immediate delivery of money insist that these contracts shall be executed in money instead of other forms of promises, what happens? The banks call in loans and begin to husband their cash. If they hold large quantities of securities salable on the London or Paris or Berlin market, a cable order will effect the sale of these in an hour, and the gold proceeds will be on their way across the Atlantic within a day.

Wonderful has been the effect within the last twenty-five years of this steadying influence of the stock market upon the demand for money and upon the smoothness of the operations of the mechanism of the exchanges. What has just been put in a crude form by referring to a crisis occurs daily and hourly on the stock exchanges, and prevents sudden contraction

and expansion in the rate for loans. The manufacturer goes placidly on paying his four or five per cent for commercial loans, when if there were no stock exchanges where securities could be sold in one market at a slight profit over another he would find that his bank was first charging seven or eight per cent, then dropping to three or four, and then going back to eight. By means of the facility which the stock market affords for placing credit instantly at the command of one market or another the pressure for money is mitigated, and has but a limited effect upon the commercial borrower. Such pressure as now occurs is transferred to the borrower on call,—the broker in stocks, who thus acts as insurer for the commercial borrower. This influence of the stock market has much the effect of a buffer upon the impact of two solid bodies. Crises are prevented when they can be prevented, and when they cannot they are anticipated, and their force is broken into a mild succession of ripples instead of a tidal wave.

Securities form one of the greatest and most important parts of the modern mechanism of exchange. They are, in many cases, as good as money, and in some cases are better than money. If a large shipment of money has to be made from New York to London, it is much more economical to ship securities of the same amount than to ship kegs of gold. Credit is forwarded by cable and the securities follow by mail. All markets are thus brought into touch with one another, and respond to a fluctuation of a fraction of one per cent, but without the confusion and crash which would ensue if every sudden pressure for money was felt upon a market naked of such securities.

Japan passed through a severe crisis in 1901, and part of the year before, because of the barrenness of her stock market. She had been engaged in great enterprises, but the stimulus given her industrial interests did not prove immediately profitable. Her people had begun importing great quantities of foreign goods, including too many luxuries, and the result

was that she had large debts to pay abroad. If she had had a good security market these debts would have been settled by the transfer of securities; but having only a few securities, and those of doubtful value, to throw upon the London market, she was compelled to settle at a sacrifice the demands upon her for money. She was compelled to sell goods for any price that could be obtained. A check was put upon foreign importations, industry was brought suddenly to a halt, and famine stared her in the face. This influence of the market for securities upon prices is one of its most important benefits. If Japan in this case, instead of unloading her goods so suddenly and at such sacrifices, could have made the descent gradually, she would have been able to sell by degrees and at higher prices than those actually realized, and so would have been saved the economic loss which follows from the sacrifice of commodities under the pressure of necessity.

France was saved from one of the greatest crises of history by the large holdings

of securities among her people during the Franco-Prussian War. When Germany demanded an indemnity of five thousand millions of francs ($1,000,000,000), it was in the belief that its payment would throw a paralysis upon French industry and enterprise which would prostrate them for a generation. But what happened? When the French Government appealed to the people, saying, "We need five thousand millions of francs to pay off this indebtedness," the whole matter was adjusted through the securities market, and in a few years the Bank of France resumed the payment of gold for its notes. Frenchmen subscribed liberally for the securities of the new loans to pay off Germany, and in order to obtain the necessary funds they directed their brokers to sell in London, Berlin, Vienna, Brussels, and New York the old securities which they held.

Five thousand million francs were thus taken from the capital of France, but she was so rich that she was able to submit to it without disaster. She was rich because she had piled up these securities, with

which she was able to part without suffering. The crushing debt imposed by the conqueror was practically cancelled by transferring to other markets the titles of the debts which Frenchmen held against foreign peoples. No such operation would have been possible before the organization of the modern securities market, responsive as it is to the slightest change in supply or demand, the slightest rumor of war or peace.

France, by the possession of a flexible stock exchange and a great mass of the securities negotiable upon such exchanges, was saved from the convulsion which must have prostrated her entire industrial system if it had been necessary for her to find money to discharge the demands of the conqueror. Similar great transactions are constantly carried on by our kings of finance without any such disturbance to the money market as would occur if this resource were not available. If a hundred millions of dollars are needed to consummate a great transfer, or for a public loan, the money comes promptly to hand by

the sale of those securities, or else by simply borrowing on them in foreign markets where the securities are put up as guarantee for ultimate payment. Through all the processes of modern industrial life the existence of the securities market acts as a buffer, as a guarantee to the business community that in times of emergency and crisis the shock shall not be too sudden, that nothing determining the value of great industries shall be done in a corner, and that the market shall be kept as nearly level as actual conditions will permit it to be kept.

Some of those who admit the value of the stock market have subjected to severe criticism those who speculate for the fall of stocks. One reads constantly of the "bears" trying to accomplish such and such results by depressing securities. Napoleon had a long talk with Mollien, his Minister of Finance, in seeking to demonstrate that those who sold "short," in the belief that national securities would fall, were traitors to their country. He argued that if these men were selling national

securities for future delivery at less than their present value, they were guilty of treason to the State. But Mollien replied in substance: "These men are not the ones who determine the price; they are only expressing their judgment upon what it will be. If they are wrong, if the credit of our State is to be maintained in the future at its former high standard, in spite of your military preparations, these men will suffer the penalty by having to make delivery at the price for which they sold, for they must go into the market and buy at the price then prevailing. It is their judgment, not their wish, that they express."

The short seller—the "bear" of the money market—is often one of its greatest benefactors. He calls a halt on reckless speculation, and his acts, tending to depress prices, produce their natural result of repressing extravagant inflation of values, if his judgment is sustained by facts and by the judgment of other men. If it is simply a mistaken individual judgment, he pays for his error in cash to some one with a more hopeful and saner judgment.

The organized stock and produce markets constitute, therefore, not only a vital factor in modern exchange, but so far from being a necessary evil, as some ethical writers claim, they constitute one of the most beneficial instruments of modern civilization. Without them modern business could not be conducted, or would be conducted only with a series of shocks, upheavals, and convulsions which would result in robbing the manufacturer and consumer for the benefit of the shrewdest speculators in actual commodities.

There is another important consideration in this influence of the stock market upon modern society, which will perhaps gather up and bring into a clearer light some of the other points which have been made. The stock market, by bringing all values to a level in a common and public market, determines the direction of production in the only way in which it can be safely determined under the modern industrial system of the division of labor and production in anticipation of demand. It does so by offering the highest price

for money and for the earnings of money at the point where they are most needed. A market denuded of capital will pay a high price for capital. It is only through the mechanism of the money market and the stock exchange together that any real clue is afforded of the need for capital, either territorially or in different industries. Through the influences which the rates for money and capital exert upon investment in new industries, through the fact that capital is attracted to securities which are selling high because the industries they represent are earning well, there results a closer adjustment of production to consumption, of the world's work to the world's need, than would be possible under any other system.

From this point of view, the mechanism of modern industry affords an almost insuperable objection to State socialism. If it were attempted to establish any system of State socialism, it would have to be determined in just what proportion every article should be produced, — just how many shoes and hats, how much clothing

and sugar and vinegar the world needed, and it would be necessary to adjust the supply to that need. To-day through the mechanism of the stock market it is determined, as precisely as human ingenuity has yet found it possible, just how much is needed of every commodity, because the products of those industries which are needed are rising in value, tempting to increased production, and those which are not needed are falling, giving warning that production should be curtailed.

If the stock market were abolished and State socialism set up, who would be the judges of the direction of production? Who would determine whether there should be a million more pairs of shoes produced or only ten thousand? Who would determine whether human energy should be wasted in producing shoes nobody could use, or utilized in building railways where they were badly needed?

The guiding factor of rising and falling prices having been eliminated, there would be no means of determining promptly when the supply of any article had reached

the limit of the world's need. An executive board of one hundred of the ablest men in the world could not possibly determine the direction which production should take without the index afforded by prices in the merchandise and stock markets. But through the stock market it is determined almost automatically, with as much nicety as anything can be determined which depends upon human judgment, where further production is needed and where capital is needed. Upon that market is concentrated, in a sense, the judgment of every human being in the world having any interest in production either as consumer or producer,—not only of those who deal in stocks and securities, but those also who are directly concerned in the industries and interests which those securities represent. That delicate register of values, that sensitive governor of production, that accurate barometer of the people's needs, could not be replaced by any process that any State socialist has devised or suggested.

IV

THE ECONOMIC PROGRESS OF THE NINETEENTH CENTURY

A MORE striking growth in wealth and in the material comforts of civilization was witnessed by the nineteenth century than by any preceding century in the history of the world. This statement can be made without qualification, because of the new power brought to the aid of the human hand by machine production. The application of steam power and electricity to manufacturing and transportation has revolutionized the organization of industry, brought together distant parts of the world, and so increased the producing power of the individual arm, that the food supply, clothing, and shelter required by the community are now produced by a small portion of its members, and a larger proportion than ever before are released

from these employments for the higher ones of luxury, literature, art, and ministry to the finest tastes.

The changes in methods of business, in wealth, and in the general economic conditions, which have been thus brought about, are revealed chiefly through the creation of mills and factories, through the increase in their output, through the enlarged equipment for carrying this output by rail and steamship to all parts of the world, and through the great volume of commerce, banking credits, and saved capital among every civilized people. These changes in methods of production and exchange have caused not merely changes in the volume of things produced and in the rapidity of their exchange, but have tended by nearly wiping out the costs of transportation, to reduce competition in the staple articles of agriculture and manufacture to the character of competition in a single world market, where prices and conditions affecting supply and demand are brought to a focus by the quotations flashed around the world in an instant by

the telegraph, the telephone, and the ocean cable.

The world is now many times richer in the aggregate than it was at the beginning of the nineteenth century, and many times richer in the average wealth of the individual. Population has increased with rapid strides, and to an extent which would not have been possible under the old conditions of food production and transportation. The people of the world are no longer shut off in isolated communities, which are compelled to raise their own food and to make their own clothing, and which suffer famine and nakedness if their local supplies fail. Each civilized people, in time of peace, can now count upon the resources of all other peoples in supplying its needs, with no greater disturbance in case of crop failure or emergency than the fluctuations in the prices of securities on the stock market or the transfer of gold and credits between great banking houses.

Populations have sprung up in Great Britain, Belgium, and the large cities of

other countries, which draw their food supplies from other lands and over seas. They never expect under the most favorable circumstances to obtain these supplies entirely at home, because they have found that under modern conditions they can, by concentrating their skill and energy on certain manufactures, more profitably exchange for the food and raw materials of the less advanced countries the finished products of their mills and workshops. All this became possible upon a large scale only within the latter half of the nineteenth century. The population of the European countries more than doubled within the century, and by the unequal distribution of this increase shifted the balance of political power. This growth of Europe in population is shown in the table on page 121.

These figures illustrate the comparatively small population which fought out the Napoleonic wars, and the differences in political power and prestige which have come with changes in the numbers of the people. France in 1800 was the chief

EUROPEAN POPULATIONS IN THE NINETEENTH CENTURY

	Beginning.	End.	Per cent increase.
United Kingdom	15,668,993	40,500,000	159
France	27,349,003	39,000,000	46
Germany	22,000,000	53,900,000	145
Russia in Europe	40,170,000	110,000,000	174
Austria-Hungary	18,000,000	43,700,000	143
Italy	17,380,000	34,000,000	95
Spain	10,351,000	19,000,000	83.5
Portugal	3,630,000	5,500,000	52
Belgium	3,780,000	6,675,000	76
Holland	2,760,000	5,100,000	84
Sweden	2,159,000	5,000,000	131
Norway	884,000	2,150,000	143
Denmark	926,000	2,350,000	154
Switzerland	2,392,740	3,150,000	32
	167,450,736	370,025,000	126

power in Europe. Her population was surpassed but little by that of Austria and Great Britain combined. How recent changes in population have gone hand in hand with the shifting of the axis of political power is thus described by the eminent English statistician, Mr. Robert Giffen[1]:

[1] *Economic Inquiries and Studies*, ii., p. 12.

"These facts correspond very closely with the transfer of military preponderance on the continent from France to Germany, and with the increasing prominence of Russia, which would probably be much more felt but for the simultaneous growth of Germany. They also explain why it is that the United Kingdom, with an economic and social development resembling that of France, in many respects, has fallen less behind in the political race; why its relative position among European powers, though not what it was fifty years ago, is less weakened than that of France has been. Fifty years ago it was the leader among powers which were occupied in restraining France, singly a greater power than any. Now it is about equal in numbers to France, although its whole position is changed by the fact that no power, not even Germany, preponderates to the same extent as France once did."

How the means have been found for maintaining these great populations in comfort,—and even in luxury, when contrasted with the meagre conditions of a century or two ago,—is the story of machine production through the use of steam and of the myriad of inventions that have followed in its wake. The increase in the volume of commerce has been the striking visible proof of the in-

creased producing and consuming power of the world. The entire population of the earth in 1800 was estimated by careful students at 640,000,000 souls. The combined foreign commerce of all countries was estimated at $1,479,000,000, or $2.31 per capita. The population increased about two-thirds up to 1860, and commerce had risen only to $4,049,000,000, or less than three times the amount at the beginning of the century. The second half of the century witnessed an increase of less than half in the population of the world, but an increase in the volume of commerce nearly five-fold, and an increase in its amount per capita from $3.76 to $14.50. These comparisons are forcibly set forth by the following table:

Year.	Population.	Aggregate commerce.	Commerce per capita.
1800..	640,000,000	$ 1,479,000,000	$ 2.31
1850..	1,075,000,000	4,049,000,000	3.76
1870..	1,310,000,000	10,663,000,000	8.14
1900..	1,508,659,000	21,883,000,000	14.50

These figures show that the most rapid

upward movement in the volume of commerce occurred after 1850 and even after 1870. The earlier years of the century were largely employed in perfecting the new inventions and in supplying the manufacturing nations with the full equipment for meeting the new demands. The most important elements of this new equipment were the practical application of steam power to manufacturing, a network of railways and a fleet of ocean steamers, sufficient to link together the world's chief markets; a sufficient fund of saved capital for creating these new engines of production and exchange without trenching upon the ordinary resources of civilized communities; an organization of credit that would give this saved capital a transferable and loanable form; and, finally, a freedom for the transfer of goods and capital between nations which would permit both to compete freely in the world's markets.

The development of these various factors of modern economic life has proceeded gradually along similar but not exactly parallel lines. The capital neces-

sary for the new machinery was scanty in the early years of the century, and when railroad building began on a large scale, a severe strain was put upon the resources of even the richest nations. But every successful enterprise that permitted a larger net product from the labor of a given number of hands, increased the capacity for saving and the capital available for creating new instruments of production. Undue absorption of capital in a given direction caused temporary periods of overproduction, glutted markets, and stagnant trade; but every new crisis of this sort was followed by a new outburst of industrial activity and by a more rapid production of wealth than any which had gone before. The character of these great forces operating upon the development of the nineteenth century, and some of the results that they have produced, it is the purpose of this chapter to set forth.

One of the most efficient weapons of the new era was the power of steam. Steam first became a serious factor in pro-

duction near the middle of the nineteenth century, but in 1850 it still amounted to less than four million effective horse-power. This capacity was multiplied more than fourteen times within the half century that followed. Europe increased her equipment from 2,240,000 effective horse-power in 1850 to 36,645,000 in 1895; the United States, from 1,680,000 to 16,940,000; and the English colonies from 70,000 to 1,995,000, with the result of swelling the total for the world from 3,990,000 horse-power in 1850 to 55,580,000 horse-power in 1895. In France, where these figures are carefully kept, the returns for 1896 showed the existence of 67,347 stationary machines engaged in industry alone, with the combined horse-power of 1,262,688. In 1902 the horse-power thus employed had risen to 1,998,989, and that of locomotives to 6,556,923. The increased power attained by the human race through this new engine of production was set forth for the United States as long ago as 1886, in the following extract from a report by

Hon. Carroll D. Wright, United States Commissioner of Labor:

"The mechanical industries of the United States are carried on by steam and water power representing, in round numbers, 3,500,000 horse power, each horse power equaling the muscular labor of six men; that is to say, if men were employed to furnish the power to carry on the industries of this country, it would require 21,000,000 men, and 21,000,000 men represent a population, according to the ratio of the census of 1880, of 105,000,000. The industries are now carried on by 4,000,000 persons, in round numbers, representing a population of 20,000,000 only. There are in the United States 28,600 locomotives. To do the work of these locomotives upon the existing common roads of the country, and the equivalent of that which has been done upon the railroads the past year, would require, in round numbers, 54,000,000 horses and 13,500,000 men. The work is now done, so far as men are concerned, by 250,000, representing a population of 1,250,000, while the population required for the number of men necessary to do the work with horses would be 67,500,000. To do the work, then, now accomplished by power, and power machinery, in our mechanical industries and upon our railroads, would require men representing a population of 172,500,000, in addition to the present population of the country of 55,000,000, or a total population,

with hand processes and with horse power, of 227,500,000, which population would be obliged to subsist on present means. In an economic view, the cost to the country would be enormous. The present cost of operating the railroads of the country with steam power is, in round numbers, $502,600,000 per annum; but to carry on the same amount of work with men and horses would cost the country $11,308,500,000."

The application of the power of steam to transportation has been a necessary complement of its application to production. Manufacturing upon a large scale for a wide market would have been comparatively useless, especially for bulky articles, if the means had not been created for carrying manufactured products at low rates to the uttermost parts of the earth. The influence of railway construction has gone far beyond the mere cheapening of transportation and the increase in productive power. It has worked a change in social relations among producing nations because it has broken down the barriers between markets.

It is this fact,—the bringing of the producers at widely separated points into

competition with each other in common markets,— that has had much to do with increasing the severity of this competition and with causing the creation of trust combinations for dividing and controlling markets. There was a time when the individual manufacturer had a practical monopoly of the market within a certain distance from his mill, or at least had no other competitors than those of his own locality. The village cobbler, the local tailor, or the weaver, in an English country town, ran but small risk of competition from London or from the other great towns, because of the time required to reach them and the cost and delay of shipping goods.

The change which has brought markets nearer together has come about by degrees. The charges for railway carriage have been reduced, from decade to decade, with the improvement in railway construction, through economy in the use of fuel, derived from improvement in machinery, and through the gradual cheapening of most of the materials of construction. A

recent article in the London *Contemporary Review* estimated the combined carrying power of ships and railroads at 26,440,000 tons in 1860, and 83,340,000 tons in 1892. It was calculated that in the year 1850 the cost of land carriage for goods in Europe was about $10 a ton, for one hundred kilometres (sixty-two miles), amounting to about sixteen cents a mile. The reduction in these charges in recent years was set forth in a forcible manner by Professor Henry T. Newcomb, in a report to the Department of Agriculture in 1898, in which he showed that the average revenue from freight, per ton per mile, on the railways of the United States, fell from 1.613 cents in 1873 to 0.806 cent in 1896,—a fall of one-half the original rate within less than a generation. It has since fallen to 0.76 cent.

These reductions in the cost of transportation have resulted in a greatly increased volume of commerce. The freight traffic on the railways of the world is estimated to have trebled between 1870 and 1892, rising from 562,000,000 tons in the

former year to 1,746,000,000 tons in the latter year. Europe absorbed 902,000,000 tons of the later traffic, the United States 749,000,000 tons, and other countries 95,000,000 tons. The estimated railway equipment of the world in 1896 was about 445,000 miles (715,000 kilometres), representing a cost of nearly thirty-three thousand millions of dollars (170,000,000,000 francs).[1] How recent has been this railway development is indicated by the fact that more than half of the present railway mileage of the United States has been constructed since 1880. The mileage of 1870 was only 40,160, which rose in 1880 to 87,724 miles. The next ten years brought up the construction to 163,597 miles, since when construction has been less rapid, because the great centres of trade and production had been connected with each other and equipped with railway construction. The mileage of 1900 was about 190,000 and that of 1902 about 203,000. In France the length of rail-

[1] *Dictionnaire du Commerce, de l'Industrie et de la Banque*, i., p. 829.

ways in operation, exclusive of private lines and tramways, rose from 17,221 kilometres in 1872 to 38,166 kilometres in 1900. In the German Empire, where there were 11,729 miles in 1870, there were 30,562 miles in 1900. In Russia, within the short period from 1887 to 1900 the mileage of the State railways alone, not including the private lines, rose from 2928 to 20,346 miles. Italy increased her mileage from 3825 miles in 1870 to 9821 miles in 1899.

In the whole of Europe, according to the editor of *l'Économiste Européen*, the aggregate railway equipment in operation increased from 134,591 kilometres, on January 1, 1875, to 269,743 kilometres (165,000 miles), on December 31, 1898. A still further increase is computed by M. Leroy-Beaulieu to 296,051 kilometres (183,000 miles) at the close of 1902. The latest figures of railway construction outside Europe and the United States indicate a total of about 93,000 miles, where in 1850 scarcely a mile of road existed, and where even in 1870 there were less

than 12,000 miles. In Egypt, where railways were unknown in the middle of the century, the screech of the locomotive may now be heard along 1389 miles of line. In the Argentine Republic, where 58 miles of road existed in 1860, there were 10,412 in 1900. In Japan, which was practically without railways twenty years ago, there are now 3699 miles of line; and in Mexico, which had 215 miles in 1870, 9800 miles of road link the interior with the seacoast and the American frontier.

It is not surprising that by this new equipment with the means of transportation the world, from being separated into isolated local markets has become a single great market, in which the staple products of industry compete with each other upon nearly equal terms, whether originating in the mills of England, the pioneer of manufactures, in the shops and homes of France and Germany, in the new factories of the United States, with their modern machinery, or in the still younger establishments of China and Japan. It was estimated in

a recent article in the French economic periodical, the *Journal des Économistes*, that since 1850 a saving in the transportation of commodities has been effected by means of railways, amounting to 12 per cent of their price; so that without loss to any one, and without regard to economies in production, the necessaries of life can be delivered in any quarter of the world reached by railway traffic, at one-eighth less than would have been possible half a century ago.

The production and useful distribution of the great staple requisites of modern manufacturing, coal and iron, is one of the results which has become possible with the extension of railway traffic. The entire production of iron in the world at the beginning of the nineteenth century is reckoned by Mr. James M. Swank at 825,000 long tons, and in 1850 as 4,750,000 tons. The amount rose in 1880 to 17,950,000 tons, in 1890 to 27,157,000 tons, and in 1899 to 39,410,000 tons, of which the United States made 34.56 per cent. The production of steel throughout the

world in 1878 was 3,021,000 long tons. This large product was multiplied by 800 per cent within twenty-one years, of which the United States made 10,639,857 tons, or 39.25 per cent. The price of steel rails per ton in Pennsylvania mills was $158.50 in 1868 and $67.50 in 1880, but fell in 1890 to $31.75 and in 1903 to $28.00.

The efficiency of railways and steamships in placing at the command of civilized communities food supplies and other necessaries, has steadily increased since the carrying system of the world approached completion. Agricultural production has been stimulated, and farming upon a large scale has become possible because of the reduction of railway charges. The number of farms in the United States increased 215 per cent from 1850 to 1890, or from 1,449,073 to 4,564,641, and their total improved acreage increased by 216.2 per cent, or from 113,032,614 acres to 357,616,755 acres. From 1890 to 1900 the number rose to 5,737,372 and the improved acreage to 414,498,487 acres. The

exports of wheat from the United States, which were only 11,646,941 bushels, including flour, in 1866, rose to 186,321,514 bushels in 1880, and to 234,772,515 bushels in 1902. The average price on the farm, which was 152.7 cents in 1876, fell to 95.1 in 1880 and to 61.9 cents in 1900.

This fall in price, however, due partly to improved farming machinery and implements, was only partly borne by the farmer. The decline in the cost of carriage of wheat has been a vital element. The freight rate per bushel from Chicago to New York was 15.95 cents in 1867, and one bushel in every 5.77 bushels was absorbed by the cost of carriage. The conditions of 1880 showed a reduction in the price of carrying to 12.27 cents, so that one bushel at the price then ruling paid the cost of carrying 10.19 bushels. The conditions of 1890 showed that freight rates had fallen to 5.86 cents per bushel and that 14.16 bushels were carried for the cost of one bushel, at the low price of 83 cents then prevailing. The conditions of 1897 showed a further fall in the freight

rate from Chicago to New York to 4.35 cents per bushel, and 17.24 bushels were carried to the seaboard for the price of one, even when that price had fallen to 75 cents per bushel.

Thus, the great reduction in the price of farm products for export has been due in large measure to the increased efficiency of transportation by rail, and the fall in price on the other side of the ocean has been due in nearly equal degree to the increased efficiency of transportation by sea. The mass of consuming laborers, therefore, in the great manufacturing countries of Europe, have profited by their ability to obtain a much larger supply of food for a given product of their own labor than ever before, while the farmer has submitted to only a part of the reduction in price. What has been set forth in regard to wheat is true of other staple products. Anthracite coal, which cost $3.92 per ton at Philadelphia in 1869, was then carried 200 miles for the price of one ton. The price in 1880 was $4.53, but the fall in freight rates made it pos-

sible to carry a ton 284 miles for an amount equal to its price. Freight rates fell from 1.746 cents per ton per mile in 1869, to 1.426 cents per ton per mile in 1880, and to 0.863 cent per ton per mile in 1890, when the price of one ton represented its carriage for 406 miles. This distance had further risen in 1897, at a freight rate of 0.712 cent per ton per mile to 439 miles. The fall in freight rates would stand out still more conspicuously if it had not been accompanied by a fall in the price of coal to $3.50 per ton in 1897, which diminished by more than one-fifth the sum to be divided by the average charge per ton for freight.

The great equipment of machine production and carriage with which the world was dowered in the nineteenth century called for great amounts of capital, for the means of gathering up the scattered capitals of individuals into common funds, and for a ready and efficient means of transferring this capital. These means were found in the organization of banking credit, foreign exchange, clearings,

and stock companies. The scanty supplies of metallic money available in the civilized world in 1800 would have been pitifully inadequate to transact the great business of the closing decades of the century. Even the increase in these supplies, which raised the average gold production of the world from $16,000,000 per year for the first half of the century to $300,000,000 in its closing years, would have been insufficient to carry on modern business without the extension of the mechanism of credit. This mechanism, in the form of organized banking and the issue of circulating paper money, was hardly known outside of London at the beginning of the nineteenth century. The old specie banks had been destroyed, the Bank of France was about to be organized, and the limited circulation of the Bank of Vienna was under suspicion because of the counterfeiting of its notes by Napoleon.

The Bank of France was the oldest of the central banks of the European continent, and it was not until the middle of the century that similar institutions spread

in the other countries of Europe. Belgium was dowered with a national bank in 1850; banks sprang up in Spain, in Italy, in the states of Switzerland, and all over Germany; but it was not until 1860 that the Bank of Russia was put upon a firm basis, and not until 1875 that the Imperial Bank of Germany succeeded the Bank of Prussia and established a uniform note circulation for the new German Empire. The money supply of the world, estimated in 1800 at $2,840,000,000, had risen in the beginning of 1903 to $11,980,000,000, of which $5,382,600,000 was in gold. The gold money of the world was estimated for the leading countries at only $1,209,800,000 in 1873 and at 3,901,900,000 in 1893. The total stock of money increased more than 100 per cent within the generation ending with 1903, and the gold basis upon which it rested was multiplied by more than four times.

The banking power of the leading commercial countries is even greater than is indicated by these statistics of the supply of coin and paper money. The European

banks of issue increased their deposit accounts from 2,314,000,000 francs at the close of 1875 to 9,656,000,000 francs ($1,860,000,000) at the close of 1902, while their note circulation increased from 9,699,000,000 francs to 16,215,000,000 francs ($3,130,000,000). The banks of Great Britain alone showed deposits in January, 1903, of about £870,000,000 ($4,230,000,000). These figures, moreover, are independent of the colonial banks with London offices, and of the banks that are nominally foreign, but that have London offices and are chiefly owned by Englishmen. These classes of British banks had deposits in 1903 amounting to about £250,000,000, making the total deposits in British banks, scattered over Australia and other British dependencies, about £1,100,000,000 ($5,500,000,000).

The United States are equally large contributors to the banking resources of the world. The combined deposits of all the banks of the United States were given by the Comptroller on or about June 30, 1903, at $10,203,318,478, and the combined

banking power, including capital and surplus, as $13,310,405,650. This afforded an average banking power per capita, in the United States, of $166.90, and showed a great increase within a few years. The banking power represented by corresponding figures as recently as 1895 was only $6,703,544,084, or $95.83 per capita.

The banking power of the entire world was estimated by Mr. Mulhall, the English statistician, at $1,540,000,000 in 1840, but it rose, in 1890, to about $16,000,000,000. The increase within the next thirteen years, according to an estimate by the Comptroller of the Currency of the United States, was nearly 100 per cent, and this carried the world's credits and the money upon which they were based, to $31,398,000,000. An illustration of the remarkable growth in the employment of banking power is afforded by the organization and use of clearing houses in the leading commercial countries. In the United States, the clearings reported for the year 1903 at all cities having clearing houses, were $114,068,837,569.

The income of all workers, in all occupations in the United States in 1903, was probably about $10,000,000,000. The transactions through the clearing houses, therefore, representing the multiplied activities necessary to produce such net earnings, were eleven times their amount. In France, the payments into the Bank of France in 1903 were 174,971,000,000 francs ($33,770,000,000), which is about seven times the national income. In the case of Great Britain, the clearings at London in 1903 were £10,119,825,000 ($49,340,000,000), which is about five times the national income. An indication of the growth of clearings in these three principal countries, reduced to American money, is afforded by the following brief comparative table:

Year.	New York.	London.	Bank of France.
1870...	$27,804,539,406	$20,000,000,000	$ 9,460,000,000
1880...	37,182,128,621	28,200,000,000	14,530,000,000
1890...	37,660,686,572	38,100,000,000	16,000,000,000
1899...	57,368,230,771	44,600,000,000	28,370,000,000
1903...	70,833,655,940	49,340,000,000	33,700,000,000

This great structure of credit has grown up entirely within half a century, as a necessary factor in the new machinery of production and exchange. The early banks were conducted mainly with the capital of their own shareholders, and the fortunate few who had accumulated wealth by patient industry, colonial trading, or by careful lending of money. It remained for the last half of the nineteenth century to bring to all the banks in the advanced civilized countries a flood of the saved capital of people of small and moderate means. The new conditions of production, with higher wages for labor, and the increase in the proportion of the professional classes to the aggregate population, gave the ability to save, without the sacrifice of comforts, to hundreds of thousands of men, who, under earlier conditions, would have been barely able to maintain the struggle for existence. Hence came the great increase in deposits in the commercial banks and the creation of savings banks for the masses. There came also, as a necessary incident to the gathering

of capital for manufacturing and for railway construction, the issue of titles to wealth in a new form, representing divisible shares in these new enterprises.

This new form of wealth, almost wholly a creation of the free play of capital under modern conditions, consists of the shares and bonds of stock companies. The principle of limited liability, which applies to most stock companies, is the result of comparatively recent legislation. In the absence of such laws stock companies would be liable for all the debts of the company with their entire property, as are the members of a private firm. The principle of limited liability permits a man to embark with many others in a large enterprise, with exact knowledge of the amount that he risks.

Few men would care to buy railway shares or bank capital if they ran the risk of having their entire fortunes appropriated to pay the debts of the railway in case it went into the hands of a receiver, or if they were compelled to pay all the depositors of a bank in case of failure.

Limited liability is essential, therefore, to induce the owners of capital to go into such enterprises; it is also a matter of convenience in subdividing their expense and in combining under a single management the savings of many hundreds and even thousands of persons. It permits the man with saved capital to invest it in profitable enterprises without exercising personal supervision over his investment, except so far as he wishes to participate in meetings of shareholders to secure honest and efficient control.

Government debts,—the first form of negotiable securities, — gradually paved the way for the issue of railway bonds and stock, and of shares in manufacturing and other industrial enterprises. The remarkable growth in capital and its issues in the form of securities is indicated by the fact that in 1789, the number of securities listed on the Paris Stock Exchange was only 17, and that as late as the year 1815 the shares of only 30 companies were listed in London, 20 in Paris, and 11 in Berlin. In 1897 the number of

French securities admitted to the official exchange was 493, representing a nominal capital of 59,142,400,000 francs, or more than eleven thousand millions of dollars. There were also admitted to the official stock exchange 236 foreign securities, representing French investments abroad of about 26,000,000,000 francs. Great Britain easily leads the world in the volume of her stock exchange business. The value of her securities was computed in 1895 at £7,246,902,726, or about $36,000,000,000. This represents more than all the wealth of Great Britain or the United States at the beginning of the century, and perhaps more than all the wealth, exclusive of land, held at that time in the civilized world.

A calculation, made under the auspices of the International Statistical Institute, in 1895, put the total transferable wealth of the leading European countries, including stock exchange securities, mortgages, and savings deposits, at $85,000,000,000. An annual computation which is made in Brussels by the leading financial

journal there, the *Moniteur des Intérêts Matériels*, puts the issue of new securities in Europe at 9,129,054,150 francs in 1896; 8,911,870,530 in 1897; 8,902,776,660 in 1898; 10,577,406,550 in 1899; 11,863,434,990 in 1900; 9,937,390,060 in 1901; and 18,639,839,650 francs in 1902.

These large issues of new securities have been the natural result of a great increase in the number and capitalization of stock companies. An outburst of activity in the creation of such companies has been one of the marked features of the modern era of industrial growth. In Great Britain, the organization of stock companies was 1302 in 1880, with a total capital of £168,466,322, which rose in 1890 to 2789, with a capital of £238,759,472; in 1895 to 3892, with a capital of £231,368,077; in 1898 to 5182, with a capital of £272,287,690; in 1900 to 4966, with a capital of £221,827,934; in 1901 to 3433, with a capital of £144,760,333; and in 1902 to 3933, with a capital of £156,714,468 ($765,000,000).

The figures regarding the companies

actually continuing in business in Great Britain from year to year, showing the sifting out of the incompetent and the gradual additions to working capital of the more efficient, afford a more accurate test of the accumulated capital resources of the country. The total number of such companies was estimated in April, 1884, to be 8692, with a paid-up capital of £475,551,294. The total rose more than 60 per cent by April, 1890, when the number was 13,323, and the paid-up capital was £775,139,553. A further increase carried the number in 1899 to 27,969 with paid-up capital of £1,512,098,098; in 1900 to 29,730, with paid-up capital of £1,622,641,406; in 1901 to 31,429, with paid-up capital of £1,725,940,512; and in 1902 to 33,259, with paid-up capital of £1,805,141,165 ($8,800,000,000).

In Germany the organization of the empire under a common head and the large fund of capital brought into the country by the war indemnity paid by France, resulted in a stimulus to the creation

of stock companies, which caused the formation of 479 in 1872, with a capital of 1,477,700,000 marks ($360,000,000), and 242 in 1873, with a capital of 544,200,000 marks. Then came the effects of the crash of the latter year, which reduced the organization of companies to a minimum of 42 in 1876, with a capital of 18,200,000 marks. There was a slight revival of activity in 1880 and in 1889, but it was only with the year 1895 that the creation of stock companies upon a more solid basis again attained striking figures. The number of companies organized in 1895 was 161, with a capital of 250,700,000 marks; 1897, 254 companies, with a capital of 380,500,000 marks; 1898, 329 companies, with a capital of 463,600,000 marks; and 1899, 364 companies, with a capital of 544,400,000 marks ($135,000,000). Then came the industrial reaction which carried down the number of companies formed in 1900 to 261, with capital of 340,460,000 marks; in 1901, 158, with capital of 158,250,000 marks; in 1902, 87, with capital of 118,430,000 marks; and in

1903, 84, with capital of 300,036,000 marks ($75,000,000).

The growth of corporations in Russia has been even more remarkable. The capital of all stock companies organized during the nineteenth century, up to the close of 1899, was about 2,383,000,000 rubles ($1,200,000,000), or as much as the issues of the single year 1899 in Great Britain. But of this amount more than half was authorized during the five years beginning with 1895. The highest record reached prior to that year was in 1890, when the issues of capital were 63,415,000 rubles. The issues for 1895 rose to 129,363,000 rubles; 1896, 232,640,000 rubles; 1897, 239,424,000 rubles; 1898, 256,237,000 rubles and 1899, 358,354,812 rubles ($187,000,000).

The equipment of the civilized world for grappling with the new conditions of transportation and exchange would still have been incomplete, in spite of the spread of the railways, and the accumulation of transferable capital, but for the series of inventions which promote quick

communications. The post-office, the telegraph, the ocean cable, and the telephone were an almost necessary supplement of the more substantial and visible instruments of the new economic order. In Great Britain and in the United States, the use of the mails doubled within the twenty years which closed the nineteenth century. The number of letters delivered in the United Kingdom of Great Britain and Ireland rose from 1,165,000,000 in the fiscal year 1881, to 2,323,600,000 in 1900 and 2,451,500,000 in 1901. The average number per capita rose in the meantime by more than 60 per cent, from 34 to 59. The number of newspapers and packets delivered increased by more than 150 per cent, from 364,000,000 in 1881 to 936,000,000 in 1901.

An exact account is not kept in the United States of the number of pieces of mail matter handled, but an illustration of the progress made is afforded by the number of postage stamps and other pieces of stamped paper which are sold at

the post-offices. The number of pieces of stamped paper thus issued was 1,490,773,498 in 1881, representing a face value of $34,483,503. The amount substantially doubled in 1890, when the number of pieces was 3,183,741,338, and their value was $59,458,054, and nearly trebled for the fiscal year 1900, when the number of pieces was 5,283,687,010, and the face value was $97,640,897.

Thus, within nineteen years, with an increase of about 50 per cent in population, there was an increase of nearly 200 per cent in the postal expenditure of the people, and their per capita postal expenditures rose from 70 cents to $1.30. The prosperous period of the next few years brought a further increase to 6,061,456,127 pieces of stamped paper for the fiscal year 1902, with a face value of $112,665,553, and to 7,034,732,035 pieces in 1903, with a face value of $129,430,173. Thus in three years from 1900 to 1903, there was an increase of more than 30 per cent in the value of the postage used by the American people and a consumption

of more than $1.50 per capita or nearly $8 for the average family of five.

In France the number of letters passing through the mails increased more than 60 per cent from 1860 to 1881, and more than 100 per cent from 1881 to 1901. The number of letters delivered in 1860 was 265,352,000, which rose in 1881 to 481,130,349; in 1898 to 718,252,123, and in 1901 to 1,000,920,000. The increase was much more striking in the delivery of newspapers and other printed matter, which rose from 179,138,000 pieces in 1860 to 687,692,521 pieces in 1881, to 1,214,039,377 in 1888, and to 1,323,269,000 in 1901. In Belgium the delivery of letters rose from nearly 73,419,058 in 1880 to 162,983,336 in 1900, and the delivery of newspapers increased in nearly corresponding ratio, from 71,380,000 in 1880 to 134,724,720 in 1900. In Germany the increase in letters was from 565,528,000 in 1875 to 731,755,000 in 1880, to 1,437,948,000 in 1890, and to 2,893,555,000 in 1900. In Austria, the letters and post-cards handled increased

from 26,071,000 in 1850 to 148,499,000 in 1870, to 538,273,000 in 1890, and to 1,193,418,000 in 1900.

The increase in the use of the telegraph and the telephone has been even more phenomenal. In Great Britain the number of messages sent rose from 29,966,965 in the fiscal year 1881, to 62,368,034 in 1890, 90,415,123 in 1900, and 92,648,337 in 1901. A great increase occurred after 1885, when the minimum charge for an inland despatch was reduced from a shilling (24 cents) to sixpence (12 cents). In the United States the number of miles of wire operated by the Western Union Telegraph Company rose from 112,191 in 1870 to 802,651 in 1895, 933,153 in 1900, and 1,089,212 in 1903. The number of offices rose from 3972 in 1870 to 21,360 in 1895, 22,900 in 1900, and 23,120 in 1903. The number of messages sent increased from 9,156,646 in 1870 to 58,307,315 in 1895, 63,167,783 in 1900, and 69,790,866 in 1903. The Postal Telegraph Company increased its length of wires from 23,587 miles in 1885 to

143,290 miles in 1898, and 276,244 in 1903, while the number of messages rose from 1,428,690 in 1885 to 15,407,018 in 1898, and 21,600,577 in 1903.

In France the length of telegraph lines rose from 70,277 kilometres (43,650 miles) in 1881 to 130,830 kilometres in 1898, and the kilometres of actual wire from 215,136 to 590,713 (366,800 miles). The number of messages increased within seventeen years from 18,561,038 in 1881 to 40,146,720 in 1898, or by 116 per cent. The use of telephones, which was not a factor in communication in 1881, amounted in 1898 to 123,561,310 messages. In Germany, the length of telegraph lines rose from 15,048 miles in 1870 to 37,236 miles in 1880, and to 84,016 miles in 1900. The length of wire, which was 50,287 miles in 1870 and 132,476 miles in 1880, rose in 1900 to 381,026 miles. The number of home messages, which was only 4,731,919 in 1870 and 9,448,126 in 1880, was 28,643,849 in 1900. These figures are exclusive of Wurtemberg and Bavaria, two large German states, whose telegraph

mileage is more than 14,000, and where the number of messages sent in 1900, within the two kingdoms alone, was about 1,875,000, and the number sent to foreign countries and to other German states was nearly 4,000,000. In Belgium, the mileage of lines rose from 3451 in 1880 to 3976 in 1900, because of the comparatively complete equipment of the small area of the country on the earlier date, but the number of home messages increased more than 60 per cent, from 2,031,426 in 1880 to 3,377,910 in 1900, and the number of international messages by more than 150 per cent—from 1,035,655 in 1880 to 2,808,239 in 1900.

The total length of the telegraph and cable wires of the world, according to an estimate presented by O. P. Austin, Chief of the Federal Bureau of Statistics, at the beginning of 1899, was 2,300,000 miles. The length of the land lines was put at 662,000 miles, representing a cost of $310,000,000, and the length of ocean cable lines at 170,000 miles, representing a cost of $250,000,000.

What has been set forth in regard to producing power, railway equipment, banking power, and means of communication, represents in a sense the processes of modern production rather than its results. This splendid equipment has been in operation for so brief a period that its full capacity has only begun to be tested, but already its powers have been demonstrated by a greatly increased manufactured product, an enlarged volume of trade between nations, and new standards of comfort for the masses of men. The aggregates of the world's commerce, already presented, almost fail of their proper impression by their very magnitude. It will be well, therefore, to set forth a little more in detail the progress of the closing decades of the nineteenth century.

From 1870 to 1900, the wealth of the United States rose from $30,068,518,507 to $94,300,000,000—an increase of more than 200 per cent in a generation, while population advanced only half as rapidly —from 38,558,371 to 76,303,387. The ratio of wealth per capita, therefore, rose

from $779.82 in 1870 to $1235 in 1900. Exports of American merchandise kept pace with the growth of wealth, and exports of manufactured articles rose with phenomenal rapidity, when American prices were brought down to the level of those of the world after the panic of 1893. Some conception of the recent progress of this movement may be formed from these figures:

MERCHANDISE EXPORTS FROM THE UNITED STATES

		Exports of Manufacture.	
Year ending June 30.	Total Domestic Exports.	Value.	Per cent.
1860	$316,242,432	$40,345,892	12.76
1870	455,208,341	68,279,764	15.00
1880	823,946,353	102,856,015	12.48
1890	845,293,828	151,102,376	17.87
1895	793,392,599	183,595,743	23.14
1898	1,210,291,913	290,697,354	24.02
1900	1,370,763,571	433,851,756	31.55
1903	1,392,231,302	407,526,159	29.28

The growth of wealth, and foreign trade, was equally remarkable in the case

of Great Britain. Exports of British products were £51,308,000 ($250,000,000) in 1840, and had already risen in 1870 to £199,640,000 ($975,000,000); but the amount rose in 1890 to £263,530,585, and to £290,890,281 ($1,415,000,000) in 1903. The increase was not large, because the additions to British capital began to be employed abroad instead of swelling production at home. This resulted in making the borrowing countries tributary to Great Britain, who was able to take her dividends in a great excess of merchandise importations over exportations. Imports of merchandise rose from £370,967,955 in 1885 to £542,906,325 ($2,650,000,000) in 1903. The property and profits brought under review for the purposes of the income tax reached a total of £137,823,000 ($680,000,000) in 1815. They rose to £527,675,000 in 1877, to £626,356,000 in 1890, to £833,355,513 in 1901, and to £866,993,453 ($4,225,000,000) in 1902. Thus the brief period of twenty-five years, from 1877 to 1902, witnessed an increase of assessable

property amounting to £340,000,000, or nearly 65 per cent.

A natural consequence of the increased productive power of the civilized world has been the increase in the comfort of the masses. While it is sometimes contended by those who have not carefully examined the facts, that "the rich are growing richer and the poor poorer," the statistics bearing upon the subject generally go to sustain only the first half of the proposition, and to disprove the second half. While it may be true that the distribution of the new wealth has not been altogether equitable, it has been almost inevitable that a large portion should fall to the laboring masses, because of the employment of the bulk of modern wealth in administering to luxury or to new production. Wealth which is not kept in idle hoards tends to develop new industries, to increase the demand for labor, and to thereby raise wages by intensifying the competition among employers for labor.

There are several interesting statistical

facts that tend to support the view that the comfort of the masses materially increased during the nineteenth century, and that the number of persons enjoying some of the luxuries of life greatly increased in proportion to the whole population. Careful inquiry by such competent authorities as Col. Carroll D. Wright, the United States Commissioner of Labor, shows that wages in all the chief lines of manual labor were much higher at the close of the century than at its beginning.

Advances in wages were slow during the Revolutionary and Colonial periods, but the advance in mechanical industries attained a constantly accelerating impetus after the introduction of the factory system. In 1790, carpenters were paid less than 60 cents a day. This rose to $1.09 in 1810 and to about $1.40 in the North by 1840. Laborers, paid 43 cents a day in 1790, were receiving from 87.5 cents to $1.00 by 1860. Shoemakers, who received 73.5 cents in 1790, were paid $1.70 in 1860. The average wages during the ten years ending with 1860 gave to agricultural

laborers $1.01 per day, to blacksmiths, $1.69, to carpenters, $2.03, to masons, $1.53, to mill operatives, 87 cents.

Then came the great outburst of railway building and machine industry, which made the closing decade of the nineteenth century so notable in economic history. The subject of wages and hours of labor during this period was investigated under the authority of the Senate Committee on Finance by Prof. Roland P. Falkner, in 1891. The result reduced all wages to percentages based upon those of 1860 as the unit. The figures showed that when wages were reduced to a gold basis, they averaged in 1840 87.7 per cent of the wages of 1860. Then came the period of greenback issues during the Civil War, when wages in paper were high, but represented only 66.2 per cent in gold of the rates of 1860. The upward movement was rapid as the premium on gold fell, and the gold wages of 1872, when prices were also high, were 152.2 per cent of those of 1860. There was a fall during the years of depression

that carried wages as low as 135.2 in 1876, but even at this time, their purchasing power was probably quite as large as in 1872, because of the fall in prices of nearly all manufactured articles and of other necessaries of life.

After the resumption of specie payments began a new upward movement in gold wages, which carried them in 1880 to 141.5 per cent of the rates of 1860, to 158.9 per cent for 1890, and to 103.43 per cent of the wages of 1891 for the year 1900. This upward movement of wages went on while the average working hours, which were 11.4 in 1840, fell to eleven hours in 1860, to ten and a half hours in 1870, to 10.3 in 1880, and to ten hours in 1889. This was the average of all leading mechanical industries, including some in which long hours still prevail, but others in which the time has fallen considerably below ten hours a day. Comparing the hours of labor with the rate of wages, it appears that the amount of money now paid is, substantially, twice that paid half a century ago for a day

which is at least thirteen per cent shorter than that under the smaller wages.

The upward movement of wages has been accompanied by the downward movement of prices. This proposition would be an incredible paradox, if there had not been so great an increase in the productive power of labor by means of machinery. A simple average of prices for all commodities, taking 1860 as the unit, showed average prices for the five years ending with 1844, of 108.8; which advanced during the paper-money period as high as 178.8 for the five years ending with 1869, but fell to 92.3 for 1891. The purchasing power of wages, therefore, is considerably greater than is their nominal increase in money. If this fact is not clear to all wage earners, it is largely because there are so many articles, like glass, chinaware, wall-paper, carpets, and the finer grades of clothing, that are now considered necessaries in the life of the laborer, which were not enjoyed at all, or only in inferior qualities, when the productive power of the human race was smaller.

Definite proof of the increased consumption of high-grade food products by the masses can be found in the statistics of certain countries. The British returns of colonial products imported per capita are among the most authentic of these statistics, and they reveal some astonishing results. The table which follows shows the per capita consumption of sugar, tea, and tobacco in the United Kingdom for representative fiscal years:

CONSUMPTION IN GREAT BRITAIN

(In Pounds Per Capita)

Year.	Sugar.		Tea.	Tobacco.
	Raw.	Refined.		
1840	15.20	——	1.22	0.86
1880	53.98	9.42	4.57	1.42
1885	59.05	15.89	5.06	1.46
1890	44.99	28.22	5.17	1.55
1895	48.04	40.09	5.67	1.67
1898	39.89	45.29	5.86	1.83
1899	35.63	48.68	5.98	1.89
1900	35.26	51.90	6.07	1.95
1901	32.18	56.81	6.16	1.89
1902	35.05	48.90	6.06	1.92

These figures show that within the past sixty years the consumption of tea by the British people has increased more than fourfold per head, and that the consumption of tobacco has more than doubled. The increase since 1880 has been more than 25 per cent in tea, and an equal amount in tobacco. There has been, therefore, not only a great increase in the quantity of these articles consumed,—articles which by the laborer of a century ago would have been rated as unattainable luxuries,—but there has been a growing preference for the best article of its kind on the market. This is demonstrated especially by the increased proportion of refined sugar used, in place of the brown raw sugar which was so generally consumed, even by the well-to-do, before the price of refined sugar was forced down by competition and by the adoption of the most efficient methods of refining.

With the evidences of larger earnings, shorter hours, and better living for the masses, may be put the evidences of wider

opportunity for a career through the increase in the numbers of the professional classes. This increase is due primarily to the fact that there is a larger surplus of capital and labor in the community than in previous generations, above what is required for producing food, clothing, and shelter. If the production of living necessities required in an early stage of civilization the continuous labor of four-fifths of the population, and improvement in machinery or in methods of production permitted these necessities to be produced at a later date by three-fifths, it is clear that one-fifth of the population would thereby be released for producing things which could not be enjoyed at all before. Hence comes the multiplication of lawyers, physicians, literary and pictorial artists, and the ability of civilized countries to bear a heavy burden of taxation for building roads, improving harbors, paving and lighting city streets, and for providing a better education and wider opportunities for every citizen.

The many facts which have been given,

showing the rapidity of industrial and economic development during the closing generation of the nineteenth century, are an index of the great accumulation of capital which has resulted from the increased efficiency of labor which machinery and industrial combination has made possible. The masses of the people live much better as a result of their increased productive power than was the case at the beginning of the nineteenth century, or even at the beginning of the last generation of that century.

So far as they consume more than they formerly did, they do not contribute so rapidly to the accumulation of capital as if they employed their increased productive power entirely in savings. As production, however, must necessarily be for consumption in some form, the increased productive power of the masses, so far as it had been applied to direct consumption, has caused a demand for many classes of goods which has justified the creation of new enterprises and their equipment with the most efficient modern machinery.

Every such enterprise, by increasing the productive power of labor and therefore the remuneration of the aggregate labor of the world, has increased the capacity for saving. So far as this capacity has been exercised, there has been brought into the money market a great fund of saved capital seeking investment in safe dividend-paying securities. It is the almost bewildering rapidity with which this fund has increased, as already pointed out, which has taxed the resources of honest financiers to find employment for it and has led the less scrupulous or more venturesome to devise projects of doubtful utility for meeting the demand for profitable investment.

V

PUTTING CHINA ON THE GOLD STANDARD

WESTERN civilization has seemed, during the last few years, to be sighing with more restlessness than Alexander for new worlds to conquer for its inventive genius and its financial and economic organization. Such conquests, happily, where they do not raise the question of territorial acquisition, benefit alike those who make them and the countries where they are made. Railway construction within the past decade has traversed the steppes of Siberia, bringing the West within two weeks' journey of the extreme Orient; has connected Europe with Central Asia and the Caspian Sea, and has carried the shriek of the locomotive, through the cities where Paul preached, to the capitals of the ancient civilizations of Nebuchadnezzar and Xerxes. A railway is being com-

pleted from "Cairo to the Cape," which is sending offshoots through the heart of Africa and spreading the arts of civilization through a country which, a generation ago, could hardly be traversed by the most hardy explorers under armed escort.

Familiar as are the arguments for the benefits derived from railways, their real influence as agents alike of civilization and centralized power is often overlooked. They have made possible political unions which would otherwise be extremely difficult. Many were found who predicted that the American Union would fall to pieces of its own weight when it extended to Oregon, and the maintenance of Russian power in Asia would hardly be possible without her network of ways of steel. The recent history of Mexico is another case in point. Insurrections against the central authority, which once spread for weeks before they were even known at the capital, can now be suppressed by the use of the telegraph and the railway almost before they have taken form. The railway system in China is yet in its infancy,

but the country promises soon to be grid-ironed with bands of steel, which will open a new chapter in her economic life. In addition to the four roads already in operation to the extent of nearly a thousand miles, not less than five great lines are in process of construction, which will connect the chief cities of the interior and the coast. Concessions for half a dozen others have been granted, the plans for which are being rapidly perfected.

With the unification of national economic life, which will come to China with the extension of railways, must inevitably come also many other elements of western civilization. Among these will be the use of money and the adoption of modern methods of credit. Wherever a railway is in process of construction, coined money will be required for buying the products of the country and paying wages. Whereever a railway is in operation, money will be the only practicable medium for paying freights. Hence railway extension will open new fields for the use of money and introduce masses of the Chinese

people to the commercial habits of the West. One of the next logical steps, therefore, in the opening of China will be the adoption of a national system of currency.

China has at present no national currency. So far as coined money is used, it consists chiefly of foreign coins. The Mexican silver dollar has been for three centuries current on the seaboard. Recently it has encountered competition from the British dollar of the same weight and value, coined at Bombay, and from the French piaster, also of the same weight and value, coined at Paris for the use of the French possessions in Indo-China. But in the interior of the Celestial Empire coined money is not used at all. There is a medium of exchange, however, in the form of copper cash and silver shoes or sycee, the latter being cut into parts to meet the needs of different transactions.

The people of the interior of China probably have not yet realized the extent to which the lack of coined money hampers the development of trade. On the sea-

coast, however, another element has entered into the problem, which is stimulating the demand, even among the Chinese merchants, for sweeping reform in the monetary system. This element is the frequent change in the gold price of silver bullion. All the silver coins in use in China circulate substantially for their bullion value and upon the silver basis. For many years the disadvantages of the fall of silver were felt in China, but they have become acute during the past few years. Silver fell from about 30¼d. per ounce in the summer of 1900 to about 25d. in the autumn of that year, and again from that figure to 21 5/16d. in November of 1902. The last fall produced a paralyzing effect upon the import trade of both foreign and Chinese merchants doing business in China, and by reducing the gold value of the public revenue crippled the Government in its ability to meet the indemnity payments to the Powers.

When Mexico, therefore, towards the close of 1902, appealed to China to cooperate with her in seeking some remedy

for the fluctuations of exchange with the gold countries, she received a prompt response. Mexico has been progressing rapidly in recent years. This progress has been interpreted by some of the ardent friends of silver as due to the monetary standard rather than to the energy of the people, the extension of railways, the abolition in 1896 of tariff barriers between the States, and the many other economic and political reforms introduced by President Diaz and the group of able men around him. Mexico has begun to recognize, however, the great disadvantage of a monetary standard which differs from that of the commercial countries with which she deals. Not only is her import and export trade seriously hampered, but hundreds of millions of capital which would eagerly be invested in the extension of her railways and the development of her lead and copper mines are withheld because of the fear that if converted from gold into silver its gold value might fall to a point which would extinguish even very considerable silver profits.

Mexico and China, therefore, joined, in January, 1903, in asking the United States to aid them in presenting to other governments the question of securing stability of exchange between the currencies of the gold-standard and of the silver-using countries. President Roosevelt, under the authority of Congress, responded by the appointment of a commission, composed of Hugh H. Hanna, Charles A. Conant, and Jeremiah W. Jenks, which has recently concluded its presentation of the subject to the European Powers having large commercial interests in the Chinese Empire.

The first aim of the American and Mexican commissions has been to put China upon the gold standard. They recognized from the first that such a policy was surrounded by difficulties, but they believed those difficulties could be overcome by patience, energy, and skill. The lack of any national monetary system whatever in China, while an obstacle in some ways to the introduction of a new system, is in other ways an advantage.

The Chinese Government escapes the burden which it would be compelled to assume if it had to undertake, as Russia did in 1894, or as Spain is trying to do at the present time, to raise a great mass of depreciated paper or silver to a fixed gold par. For China there is no such problem, because her Government is not responsible legally or morally for the coins of foreign countries in circulation in her seaports. She is undoubtedly bound by the highest considerations of financial policy not to take any step which will paralyze commerce and destroy confidence, but this she will be able to do, under intelligent management, without assuming the burden of redeeming at an enhanced gold value the money now in circulation.

Another element of difficulty in the introduction of a new system into China lies in the privileges now enjoyed by the viceroys in regard to coinage and by the local Chinese bankers in drawing profits from the exchange of moneys. In the introduction of a national monetary system it is essential that the right to coin and issue

money shall be concentrated in the hands of the central government. The power of the viceroys, however, is too great to allow of their privileges being taken away abruptly and without their consent.

Fortunately for the future of China, the viceroys in several of the leading provinces are now men of ability, foresight, and patriotism, and are themselves likely to aid powerfully in giving China the benefits of a national monetary system. Through reorganization of the taxes and perhaps the payment of commissions in distributing the new money, some compensation for taking away the right of coinage can be made, which will prevent heavy loss of revenue by the viceroys in the early stages of the new system. The local bankers, who make large profits by the exchange of the silver sycee and the copper cash, might also oppose the new system if similar compensation were not made to them in the distribution of the new currency.

The attitude of the foreign banks doing business in China is an important factor

in the introduction of a new monetary system. They have made great profits during the last few years by the fluctuations in the exchange with European countries and with the United States. It might seem that the foreign bankers would hesitate to renounce these profits and would oppose the introduction of a uniform monetary system. The more the subject has been discussed, however, the more the bankers have realized that enlightened self-interest, as well as sound public policy, demands a system which will reduce the fluctuations of exchange to the usual limitations between gold countries. On the Commissions appointed to meet the Mexican and American Commissions at London, Paris, Berlin, and St. Petersburg sat representatives of the great banks doing business in the Orient — the Hongkong and Shanghai Bank for Great Britain, the Bank of Indo-China for France, the German-Asiatic Bank for Germany, and the Russo-Chinese Bank for Russia. These gentlemen all agreed that the gold standard for China

was ultimately desirable and that measures should be taken as soon as practicable to put it into effect. They appeared to be influenced by the consideration that what tended to China's industrial development would eventually benefit those who conducted her banking business.

If the new standard were to go into effect within ninety days throughout the Empire, undoubtedly losses to the banks would occur, so heavy as to cause them to hesitate from motives of self-preservation to see it established. It is clear, however, that even if difficulties give way with unexpected ease, its introduction must be gradual. Introduced probably at first in the cities of the coast, where coin is already familiar to the people, it will be extended through one coast province to another, and will then make its way into the interior, as the people there find how much more convenient are coins of uniform size and ascertained value than the silver bullion which has to be weighed and assayed every time it is used. Exchange between the cities on the coast

and the interior will continue to fluctuate, and the banks will continue to derive profits from this source and from others related to the introduction of the new system while they gradually readjust their methods to the new economic future of China which will grow out of the extension of railways, the introduction of foreign capital, and the extension of her import and export trade.

What is meant by introducing the gold standard into China deserves explanation. Upon its face the proposition appears to many persons to be impracticable. If China were to acquire a gold currency of $3 per capita, which is about one-tenth the monetary stock of the people of the United States, her population of 400,000,000 would require $1,200,000,000 of gold. This would mean a draft upon the world's gold resources equal to one-quarter of the entire existing stock. The rich nations of Europe and America would undergo a monetary crisis if such a demand were successfully made upon them; and the financial resources of China would be ut-

terly incapable of making such a demand successfully upon nations so strong financially and so vitally interested in keeping their gold. In short, China could not get the gold.

How, then, is China to set up the gold standard? Can she have a gold standard without a gold circulation? If this question had been asked a generation or two ago, without the experience of other nations in recent years, it would probably have received an emphatic negative. Fortunately, however, the question has been answered in many lands under diverse conditions in a manner which justifies a decisive answer in the affirmative. British India has to-day a gold standard without a gold currency; the Netherlands have had for thirty years a gold standard without a gold currency. Belgium is in nearly the same position. France has now a considerable stock of gold, but since 1875 she has maintained at gold par several hundred millions of silver. The United States have done the same thing. Their $650,000,000 in silver, if sold in the bul-

lion market at present prices, would net about $300,000,000. The difference between the face value and the bullion value represents the power of certain economic laws to maintain a token currency at par with gold.

Three means may be counted upon to maintain a silver currency at par with gold. These are (1) limitation of the quantity of coinage; (2) acceptance of the coins at gold par for public dues, and in execution of ordinary contracts in legal-tender money, (3) the maintenance of a gold reserve or gold exchange funds.

The limitation of the coinage goes far in itself to maintain the value of a currency. There is always a certain demand for legal-tender money, partly for settling the customary transactions of retail trade; partly for the payment of more formal contracts for longer terms, and partly for reserves of banks and merchants likely to be called upon to make money payments. It is upon the principle that a certain proportion of legal-tender money will be required in use, even under the most ad-

verse conditions, that the Bank of England is allowed to issue over £16,000,000 in bank notes without any metallic reserve.

In the revision of the charter of the Bank of England in 1844 stress was laid upon the point that the limit of "uncovered issues" (not protected by any metallic reserve) should be fixed at the minimum of the demand for bank notes as shown by the previous history of the circulation. Within such limits it may fairly be argued that the money issued will not return to the issuer for redemption, because it will be constantly required for carrying on the internal trade of the country.

This principle of scarcity is a potent factor in keeping up the value of money, but is far from being satisfactory as the sole method of governing the money of a country. If the principle is carried too far, it makes money scarce and interest rates high; if it is not carried far enough, it fails to maintain absolute parity by permitting the quantity of currency at times to exceed the demand.

The acceptance of money for public

dues goes far to maintain its value, if it is not issued in excess. This was demonstrated by the history of the first Treasury notes issued in the Civil War, which were made receivable for customs duties at par with gold, a privilege which was refused to the later issues of greenbacks. There being a demand for a certain amount of money to pay customs duties and these notes being the equivalent of gold for such payment, they could always command a gold price substantially fixed, so long as the supply was not beyond the demand for this purpose. The acceptance of any money for public dues constitutes a system of indirect redemption. So long as a vent can be found for the money at the custom-houses, at the post-offices, in the purchase of internal-revenue stamps, and at the tax offices of city, State, and nation, every holder of such money knows at least one place at which he can employ it at its full legal value. If the quantity, therefore, is not far beyond requirements for public dues and retail trade, this system of indirect redemption is an impor-

tant factor in keeping up the value of the money.

These two principles—limitation of the coinage and acceptance for public dues—have been the controlling factors in keeping up the value of the silver coins of the United States and of the countries of the Latin Union since their value as bullion fell below gold par in the early seventies. They do not in themselves, however, afford the complete guaranty of stability which is required in a sound monetary system. The third and conclusive method is the maintenance of a gold fund to take up any excess which may develop in the volume of local currency. Whenever an excess appears in the currency of a country, that excess tends to go to other countries where it is likely to earn a higher return. The only money which is thus accepted abroad among commercial nations to-day is gold. A nation, therefore, which proposes to maintain its currency at absolute equality with gold must face the necessity of furnishing gold on demand for export. This is, perhaps, the most

vital principle in the maintenance of a gold standard—that while tokens and instruments of credit serve well the purposes of interior circulation, they must respond to the touchstone of exchangeability with gold to meet demands abroad.

Inasmuch, however, as the demand for gold is a demand for the use of the metal in other countries rather than at home, such a demand will be effectively met by furnishing the gold at the points where it is intended to be delivered. What has been done by the government of the Philippine Islands is to establish a gold fund in New York, against which drafts can be delivered entitling the holder to gold at New York. It is a similar policy which is proposed by the Government of Mexico in establishing its monetary system upon stable foundations. It is a similar policy which will be recommended to the Government of China as a means of securing the gold standard. If gold funds are kept at the leading financial centres—London, Paris, Berlin, St. Petersburg, and New York—drafts can be sold upon these funds

whenever there is a demand for gold for making payments abroad.

There is one essential condition to the successful operation of this system. This is that whenever drafts are sold for local currency the local currency paid for them shall be locked up and withdrawn from circulation. This operates to reduce the redundancy of the currency at home, to stiffen rates of interest, and ultimately to influence the prices of commodities in a downward direction. Hence the new system will operate under this arrangement with the same automatic precision in regulating the volume of the currency as in a country with a gold currency, like Great Britain, where the exportation of gold reduces the volume of the circulation, and by making money scarce reacts upon the rates of interest. When these operations have produced their effect and there comes later a renewed demand for currency at home, that demand can be met by the deposit of gold in the reserves at the leading centres, thus replenishing the stocks reduced by the previous demands and

releasing local currency to meet the demands for increased circulation. This is substantially the plan which has been in successful operation in British India, where rupees are paid out at a fixed rate for the gold coin of Great Britain.

Upon a plan like this, tending to unify the currency of China and bring her within the circle of great commercial nations, the Mexican and American Commissions on International Exchange secured the substantial agreement of all the great Powers of Europe. That a national currency was desirable, and that the only practicable means of attaining it was through a gold-exchange standard substantially on the lines above set forth, was the unanimous expression of the commissions appointed at London, Paris, The Hague, Berlin, and St. Petersburg. The only difference of opinion upon the currency of China developed over the question whether it was preferable to adopt a currency fixed from the beginning at a definite relation to gold or to saturate the country with a uniform silver currency first

and afterwards take steps to raise it by degrees, by Government and banking control over the exchanges, to a fixed gold value. The former plan was uniformly presented and urged by the Mexican and American Commissions, and the principle was indorsed in France, Germany, and Holland. The latter plan was considered somewhat more practicable in England and Russia.

The ultimate decision of the question will undoubtedly be made upon the ground in China. In order that it may be presented properly to the Chinese Government, Professor Jenks, a member of the American Commission, is in China bearing credentials from President Roosevelt. If careful examination shows that the inauguration of the gold standard from the outset, on the basis of the Philippine currency, is surrounded by too many difficulties, then the other plan may be considered; but the American Commission was strengthened rather than weakened in their position by the discussions which took place at the various capitals. They strongly

believe that no system should be inaugurated in China which does not provide at the outset for definite steps toward giving the currency a fixed relation to gold. It was for the purpose of securing stability of exchange that they were appointed, and that purpose they have steadily kept in view in their discussions with the representatives of other governments. In any case they have the full approval of every leading Power for presenting to China the subject of giving uniformity and stability to her currency at the earliest practicable moment.

Subordinate to the fundamental proposition of giving stability to the currency of China was the subject of approximate uniformity in the currencies of other oriental countries and dependencies. The Mexican and American Commissions suggested that the silver coins to be issued in oriental countries preparing to reorganize their monetary system should be issued at a ratio of about 32 to 1. This ratio was chosen for the Philippines because it corresponded roughly to the mar-

ket price of silver, but left a sufficient margin between the face value and the bullion value of the new coins for fluctuations in the price of the metal.

It is obvious that if a coin were adopted which represented the gold price of silver at a given moment, and silver should afterwards rise in price, the silver coins would become more valuable as bullion than as coins. They would go to the melting pot, and the country would be denuded of its currency. For this reason a margin of about 15 per cent between the bullion value of the coins and the value given them by law was adopted in the Philippines, and has caused no difficulties in the acceptance of the coins at their full face value. The Government of Mexico contemplates a similar ratio, and its wisdom was approved by the Governments of Great Britain and France, which are preparing to give a fixed gold value to their currencies in the Straits Settlements and Indo-China.

So frequently has the word "ratio" been used as a part of the nomenclature of

bi-metallism that it is important to state that it is not used in such a relation here. It is not intended, by adopting a ratio in China or the Straits, to attempt to fix the gold price of silver bullion at that ratio. The ratio is simply a relation chosen for convenience between the weight of metal in the gold unit and that in the silver coins. It is not a relation of value. It is in the power of governments, within certain limits, to fix the value of coins, not of commodities. They can do this in the case of coins by taking into their own hands the control of the supply in relation to the demand, and by offering to take care of the supply when it exceeds demand by taking it from the holder for gold. Only in this sense has a ratio been recommended.

Upon the relation of these measures to the price of silver bullion it is proper to say a word. Misapprehension has arisen in some quarters in the United States upon this subject, and some criticisms have been pronounced upon the Mexican and American Commissions on the ground that they were trying to "do something

for silver." It would seem that the previous record of the members of the American Commission as consistent advocates of the gold standard should have protected them from the imputation of such absurd projects as were occasionally attributed to them. They were instructed to labor to secure stability of exchange between the gold countries and the silver-using countries. That such stability could be secured permanently by any other means than the adoption by the silver countries of the gold standard was never for a moment contemplated.

It is not practicable, in the opinion of the American Commission, to seek stability for silver, under present conditions, through any of the methods pursued under the name of bimetallism. All that was attempted was to ask those governments which had occasion to make purchases of silver from time to time for their subsidiary currency or for their dependencies to so distribute such necessary purchases in regard to time as to diminish the irregularity of their demands.

The object of such a policy would not be to raise the price of silver, but simply to average the price by averaging the purchases. Such a policy could not be counted upon in itself to prevent the downward course of silver if this downward course was the result of permanent economic causes. In so far as it might prevent an abnormal rise at one time and an abnormal fall at another, producing approximation at all times toward the mean price instead of violent movements up and down, such a policy would contribute primarily toward the stability of silver bullion. What is much more important, it would contribute toward the stability of exchange between the gold countries and the silver-using countries. All that was suggested on this point, however, was subsidiary to placing China upon a definite gold basis. The views of the Mexican and American Commissions elicited at every capital but one where the subject was considered the cordial approval of the foreign commissions, and their declaration that, so far as fiscal conditions permitted,

they would be governed in future by the policy of regularity of purchases.

The ultimate aim of the project of putting China and other silver-using countries upon the gold standard is to promote the commerce of the world. The United States are interested in this object in a particular sense and in a general sense. In a particular sense they have to consider the trade of the Philippine Islands with China and with other silver-using countries in the Orient. The trade of the Philippines is already larger with gold countries than with silver countries, because the gold countries include British India, Australia, and Japan, from whom are bought many of the necessaries of life used in the Philippines. If the other countries of the Orient, including not only China, but the English and French possessions, go upon the gold standard, it will facilitate the trade of those countries with the Philippines to the mutual benefit of all.

It is in the broader general sense of promoting her own export trade, however,

that the United States is perhaps more keenly interested than any other country, with the possible exception of Great Britain, in giving stability to exchange with China. How important is stability of exchange in promoting trade is known best to those merchants who have suffered the effects of fluctuation in wiping out their profits and driving them into the dangerous field of speculation in exchange. Between two gold-standard countries importer and exporter can count with certainty upon getting a full return in gold for the goods which they sell. In trade between gold and silver countries either the exporter from the gold country or the importer in the silver country runs serious risk of finding his profits wiped out by a fall in the gold value of silver.

If a consignment of merchandise worth $1,000 in gold had arrived in Shanghai in July, 1902, when the price of silver was $24\frac{3}{16}$d. to $24\frac{9}{16}$d., it would have brought in silver about 2310 Mexican dollars. A gold bill of exchange for the settlement of the invoice would have cost this amount

to the Chinese importer or to the foreigner carrying on import business in China. Only four months later, in November, 1902, silver fell to a minimum of $21\frac{5}{16}$d., and it would then have cost about 2700 Mexican dollars to buy a bill of exchange on London for an amount sufficient to settle the invoice. If the importer in China had in the meantime sold his goods at an estimated profit of 10 per cent on the silver price of July, he would have found 2540 Mexican dollars in his hands, or less by 160 dollars than the amount required to pay his invoice. Thus, he would be not only without profit, but would be a heavy loser in interest on his money and in the costs of distributing his goods.

Such conditions can only tend to bring trade to a standstill and to force both the exporter and importer to live from hand to mouth. More important, perhaps, with regard to the ultimate prosperity of both the gold and silver countries is the effect of unstable exchange upon the investment of capital. In Mexico it is estimated that $700,000,000 of American capital has

already been invested for the extension of railways, the development of mines, and the building of smelting works and factories. This process has recently been checked by the fluctuations in the gold value of silver.

To a more marked degree has enterprise been checked in temporary loans. Capital in Mexico is still inadequate, and a Mexican banker can loan with prudence large sums for the development of the country at from 8 to 10 per cent. There are often times when he could get the money in Paris, Brussels, or Berlin at 3 per cent, making 5 per cent or more by reloaning it. But such loans must be repaid in gold within a short period. When the fall of silver within four months amounts to 20 per cent, a banker who should make loans, even upon the best security at the highest rates, would be courting ruin in borrowing a million francs in July at a cost of 460,000 Mexican dollars in silver, to repay which it would cost him in November 550,000 silver dollars. His profits in interest in six months would

be 11,250 silver dollars; his loss, by the fall of exchange, in transferring the money back to Europe would be 90,000 silver dollars.

Thus, the borrower in a silver country can under present conditions look for no aid abroad. The promoter of new enterprises is prevented from taking any steps to develop the natural resources of the country. The loss is perhaps equally great to the owner of capital in the gold country, who could himself invest at a handsome profit in loans, in bills of exchange, and in the shares of mines and railways in Mexico and China, if he could count upon a safe return. The rupture of the par of exchange between gold and silver countries has undoubtedly done much to divide the world into two halves, those using gold and those using silver. It has tended to congest unused capital in the rich countries, with a depressing effect upon rates of interest, the return upon the investments of widows, orphans, and those who hope to save a competence for old age, and has left the silver

countries to struggle along with insufficient means for developing the treasures of nature which are locked in their soil.

This rupture of the par of exchange was always one of the strongest arguments in favor of international bimetallism; but international bimetallism involved too great a reversal of the policy of the gold countries to be a workable remedy, even if it were in any sense a desirable one. The Commission on International Exchange are seeking a remedy along those lines, which, without impairing in any way the gold-standard system of the advanced countries, will make possible again the free flow of capital and enterprise between those countries and the undeveloped countries, whose virgin soil needs their touch to enter upon the great career of economic development which has marked the history of the gold-standard, machine-using, capitalistic countries during the past half century.

It was a high tribute to the disinterestedness of the United States that China should appeal to her for assistance

in putting her monetary system on a sound basis. If Secretary Hay succeeds in carrying out the project for a uniform monetary system in China, he will add another shapely stone to the edifice of diplomatic triumphs which he has raised by securing the open door and protecting the integrity of China.

The interest of Americans in China is simply to find wider markets. This is an interest which is consistent in every way with the progress and prosperity of China. Wide markets can best be found by increasing the purchasing power of the Chinese people. Increased purchasing power is the result of increased prosperity, of which a sound currency, as America herself has found to her cost, is a vital element. The fact that the United States were in a better position, perhaps, than any other country to take the lead in presenting the subject to China was freely acknowledged at many European capitals. It is to be hoped that the opportunity thus opened to enhance our national prestige as well as to increase

our commerce will be accepted with the same foresight and enlightened courage which have marked the other measures of our policy in the Orient.

VI

THE GROWTH OF TRUST COMPANIES

THE trust company is essentially an American institution. It was correctly declared by Mr. Charles F. Phillips at the meeting of the American Bankers' Association in 1902, that,—

"in the strict sense of the term, there are no trust companies in Europe or the Orient, and none in the Latin-American countries, barring the Mexican Trust Company, a purely American foundation, and one or two others, all in a nascent state; nor, so far as I am aware, have corporations, anywhere outside the United States and some portions of Canada, yet undertaken to do, in a conjoint and aggregate form, any substantial portion of the work which is customarily and regularly performed by the trust companies in our midst."

The growth of the business of trust companies during the last few years has partaken of the prosperity which has come to many other American enterprises.

This is plain from the statistics of their numbers, deposits, and resources, as reported to the Comptroller of the Currency, and set forth below for representative years:

TRUST COMPANIES OF THE UNITED STATES

Year.	Number.	Capital.	Individual deposits.
1891....	171	$ 79,292,889	$ 355,330,080
1897....	251	106,968,253	566,922,205
1901....	334	137,361,704	1,271,081,174
1902....	417	179,732,581	1,525,887,493
1903....	531	232,807,735	1,589,398,796

Here is a multiplication within twelve years of the individual deposits of trust companies by more than four times, or an increase of more than 300 per cent. Even within the brief period of six years the increase has been more than 150 per cent. The total resources of the trust companies of the State of New York were $300,765,575 on January 1, 1892. They rose slowly during the next five years to $396,742,947 at the beginning of 1897, and then went up by bounds to $579,205,442 on

January 1, 1899, $797,983,512 for 1901, $969,403,911 for 1902, and $1,039,735,828 on January 1, 1904. How this progress compares in New York City with that of the Clearing House banks may be seen from the following figures of individual deposits:

DEPOSITS IN NEW YORK CITY BANKS

	June 26, 1897.	June 30, 1902.
Clearing House Banks.....	$597,100,000	$960,246,000
Trust Companies.	305,354,638	760,776,124

These figures show that while the deposits of the Clearing House banks of New York City have increased about 40 per cent in five years, those of the trust companies have increased about 150 per cent. Percentages in such cases are sometimes deceptive. The trust companies first began to obtain importance about a decade ago, and it is not surprising that they have gained ground rapidly during the recent period of industrial activity. The real measure of their

progress is afforded by the fact that while the Clearing House banks of New York, with their long-established reputations and great resources, have in five years increased their deposits about $363,000,000, the trust companies of the city have increased theirs by the still larger sum of $455,000,000. Throughout the United States the business of the trust companies, although their form of organization is limited to a small number of States, has shown a striking growth. The deposits of all national banks and trust companies reporting to the Comptroller of the Currency appear in the following table:

INDIVIDUAL DEPOSITS IN BANKS OF THE UNITED STATES

	June 30, 1897	June 30, 1903.
National Banks...	$1,770,480,563	$3,200,993,509
State Banks.....	723,640,795	1,814,570,163
Loan and Trust Companies.....	566,922,205	1,589,398,796

In view of this remarkable exhibit of the growth in the business and resources

of trust companies, it becomes interesting to inquire what are these institutions, and what is the nature of the work which they are doing. Such an inquiry naturally centres around the answers to such questions as these:

What are the special functions of trust companies?

Wherein do these functions differ from those of commercial banks?

Are trust companies competing unduly with other banks?

Should any new restrictions be imposed upon the organization and management of trust companies?

In answer to the first question, it may be said generally that the functions of trust companies are to execute trusts for individuals, living and dead, and for estates and corporations.

When a man of property dies in the United States he is enabled to commit to a trust company the often complex duties of administering his estate, instead of appealing to the favor of relatives or friends. The company holds a copy of the will,

sells and buys property under orders of the courts, collects regularly rents for real estate and dividends on securities, and pays such dividends over, according to the terms of the will, to the legal heirs. In most of the States of the American Union much freedom prevails in devising property by will. A husband who distrusts the capacity of his wife or children to administer their property with prudence after his death may put the property in the hands of a trust company, and direct that the income only shall be paid to his heirs. Widows are thus guarded against the anxiety and loss which they might suffer if they undertook to administer the property for themselves; improvident sons are prevented from squandering the principal of their estates; and charitable bequests and other public benefactions are carried out in a regular and lawful manner. These functions are the same as those which were formerly performed in this country, and are still performed abroad, by attorneys, personal friends of the deceased, and other executors and ad-

ministrators; but their performance by a trust company according to prescribed methods insures greater regularity of procedure, and in many cases greater safety, economy in management, and more strict compliance with law.

One of the primary advantages of committing the charge of estates in this manner to a trust company is that its life is continuous, and its responsibility is that of a corporate body of large resources instead of the personal liability of an individual. It is a peculiar advantage of employing a trust company in the management of estates that such companies are organized especially for carrying on this class of business. It is their primary concern, and is not subordinate to other interests, as is sometimes the case with individuals having other occupations, however high their standing and strict their probity. The trust company necessarily has offices devoted exclusively to its business, with proper vaults for keeping securities and prescribed methods for carrying on each branch of its duties. It has separate

accounts for each trust, it has books showing when the interest should be collected on the securities held, and it takes prompt and constant notice, through its observations of the stock market, of influences affecting trust funds adversely, which may suggest a change in the character of investments.

The uniformity of methods imposed by law and by financial custom upon trust companies leads them to exercise their functions with extreme care. A trust company is not likely to assume responsibilities of a doubtful character without the order of a court, careful deliberation by its own officers, or the opinion of counsel. Some of the ablest financiers and attorneys of the United States act as advisers for the trust companies of New York and other large cities. Two Secretaries of the Treasury have become heads of New York trust companies on leaving office,—Mr. Charles S. Fairchild of the New York Security and Trust Company, and Mr. Lyman J. Gage of the United States Trust Company, whose offices face

each other on opposite sides of Wall Street. Secretary Root was the counsel for the Morton Trust Company of New York before he became head of the War Department, and was promptly reinstated in the position upon his return to private life. Former Vice-President Morton is its president, and Mr. Allen, the first Civil Governor of Porto Rico, one of the Vice-Presidents. No step is taken involving an important question of law without the advice of men of this character as executive officers and counsel. Their ability and researches are brought to bear upon a doubtful question affecting a small estate in the same manner as in the case of a large estate, because of the importance to the company of deciding correctly the principle involved.

The solvency and sound management of the trust company, especially in such important commercial States as New York and Massachusetts, are insured by the rigid system of inspection provided by the laws of the States. All the books, papers, memoranda, and cash reserves of

a trust company in the State of New York are open to the examination of State officials appointed for the purpose, at any moment and without notice.

The explanation already made regarding the functions of trust companies in relation to individuals and estates answers to a considerable extent the second question. Wherein do trust companies differ from commercial banks? The advantages derived by an individual or an estate from employing a trust company to execute important trusts naturally commend themselves to a corporation having similar trusts to be executed. The work of reorganizing old corporations and organizing new ones, taking up old securities and issuing new, which has been made necessary by the new enterprises, the consolidations, and the "mergers" of the last few years, has fallen in a large measure to the trust companies of New York and one or two other large cities. While individuals connected with these companies have, in some cases, been active in initiating these projects, the companies in their corporate

capacity have performed merely ministerial and strictly legal duties in executing the trusts committed to them. The stronger trust companies of New York have been very chary of committing themselves officially to new flotations. Some of the more conservative make it a point not to float shares, however good, but limit themselves to bonds, which have priority of lien upon the property upon which they are secured.

The national banks act to some extent as the agents of corporations in the mere transfer of the ownership of securities and the payment of dividends. In the case of the formation of a new corporation, however, or an important change in the character of the securities issued by an old one, a trust company is usually chosen as the agent in the transaction. This is because the trust companies are organized for this work, have officers and attorneys familiar with the legal points involved, and are therefore enabled to render the service with economy, precision, and the certainty of conforming strictly to law.

The New York law regarding the incorporation of trust companies confers these specific powers, among others, upon such companies:

1. To act as the fiscal or transfer agent of any State, municipality, body politic, or corporation, and in such capacity to receive and disburse money, and transfer, register, and countersign certificates of stock, bonds, or other evidences of indebtedness.

2. To receive deposits of trust moneys, securities, and other personal property from any person or corporation, and to loan money on real or personal securities.

. . . . . .

4. To act as trustee under any mortgage or bond issued by any municipality, body politic, or corporation, and accept and execute any other municipal or corporate trust not inconsistent with the laws of this State.

. . . . . .

7. To take, accept, and execute any and all such legal trusts, duties, and powers in regard to the holding, management, and disposition of any estate, real or personal, and the rents and profits thereof, or the sale thereof, as may be granted or confided to it by any court of record, or by any person, corporation, municipality, or other authority; and it shall be accountable to all parties in

interest for the faithful discharge of every such trust, duty, or power which it may so accept.

. . . . . .

If a railway company, for instance, should decide to substitute new securities for old, a trust company would naturally be the agent chosen as the intermediary in the transaction. It would receive the old bonds from their holders, issue receipts for them, and later issue the new securities to those who brought back their receipts. If money were to be paid on either side, it would be distributed by the trust company. The company, acting under the best legal advice, without prejudice toward either party, complying strictly with the terms of the agreement as interpreted by the most competent legal talent, thus acts as a guardian for the interests of the public on the one hand and the corporation on the other.

The peculiar province of the national banks is the lending of their deposits upon commercial paper and the issue of circulating notes. It was chiefly for the latter purpose that they were originally

sanctioned by law, much as this function has been atrophied by a clumsy system of security for note issues. How different are the functions of the national banks from those of the trust companies may be inferred from comparing the provisions of the New York law, already given, with the provisions of the national banking law, that a national bank may exercise—

> all such incidental powers as shall be necessary to carry on the business of banking; by discounting and negotiating promissory notes, drafts, bills of exchange, and other evidences of debt; by receiving deposits; by buying and selling exchange, coin, and bullion; by loaning money on personal security; and by obtaining, issuing, and circulating notes, etc.

The powers and activities of the two classes of corporations—trust companies and national banks—trench upon each other in some directions, but it is obvious that each has separate fields, which are not likely to be entered by the other. The field in which the competition of the trust companies with national banks has attracted the most attention is probably

the acceptance of deposits and the use of these deposits in the loan market. The acceptance of deposits by trust companies was at first limited largely to deposits which were not likely to be the subject of frequent transactions. In many cases it was specified that the deposit should be left in the hands of the company for a fixed time, and deposit receipts were given instead of ordinary pass books.

When money was left in the custody of a trust company under these conditions, such large provision was not required for reserves as in the case of money subject at any time to be withdrawn by checks. The opportunity for its continued use by the trust company permitted, moreover, the payment of a fair rate of interest. Hence, trust companies generally paid interest to individual depositors ranging from 1 to 3 per cent, according to the nature of the deposit. This policy attracted large deposits, especially from trustees holding funds in anticipation of some fixed event and corporations desiring to keep certain cash reserves in addition to

their current working accounts. Gradually large corporations, discovering the advantages of keeping interest-bearing deposits with trust companies, increased the amount of such deposits and secured the acceptance of active accounts at a less rate of interest than that paid on the more permanent deposits. The trust companies have been thus placed in possession of great resources, which increase their ability to handle conversion projects for railway and industrial corporations, and afford them a considerable fund which they are able to utilize in short-term loans.

Most of these loans are made on call,—that is, subject to repayment whenever notice is given to the borrower. According to the etiquette of New York trust companies, a mere telephone message to a borrower is sufficient to secure the repayment of a loan; but it is a matter of banking courtesy that such messages shall go out about noon in order to give the borrower an interval before the close of banking hours to transfer his loan to another bank or company or find the money

to pay it off. The greatest conservatism is shown by the best New York companies in making these stock loans. They allow a margin of about 20 per cent between the market value of the securities and the amount loaned. They are far from accepting as collateral for loans all the classes of securities which are on the market. In most cases, moreover, a variety of securities is required to protect each loan, so that a shrinkage on one would be covered by the solidity of those remaining. It has been declared by officers of leading New York trust companies that not a dollar has been lost by them upon these secured stock loans.

The trust companies differ from the national banks in the character of the loans made. They trench little upon the field of the national banks in discounting the paper of merchants based upon mercantile transactions. This is a very important field of banking, has a close relation to the volume of currency required by trade, and is the field which the national banks, when they were first authorized,

were expected to occupy. The larger portion of national banking business is still of this sort, and it has grown greatly within the past five years. There has undoubtedly been a feeling here and there, however, that the national banks, since the rise of the trust companies, were relatively losing deposits and losing their share in the large operations which some of the trust companies have found so profitable. It may be said on this head that as much depends upon the personality of the banker as upon the form of banking organization.

If a few captains of finance in New York have shown peculiar capacity for drawing to certain trust companies a large volume of business, it is highly probable that the same men would have accomplished similar results through a State bank, a national bank, or a private corporation, if the trust-company organization had not been directly open to them by law. It is no secret among intelligent bankers that the trust companies which have made the largest profits have

not derived those profits from the mere routine of banking. Trust-company profits have been derived largely from the skill of their officers in financing important combinations and aiding in the creation of new enterprises. It requires, however, high reputation, great prudence, and large capital to succeed in such projects, and some of the mushroom companies which sprang into existence under the fostering sunlight of prosperity are not finding the business so easy and profitable as they anticipated.

A trust company is better fitted by law and by the nature of its organization for work of this character than a national bank. A national bank has imposed upon it the function of safeguarding the currency. It is forbidden to intrust more than one-tenth of its capital to any single person, firm, or corporation. Its resources must be kept in such condition that they can be turned into money on the shortest possible notice. The same is true of such trust companies as pay their deposits on demand, but the trust companies hold

many large deposits nominally subject to payment on demand, but which they know are not likely to be called for. If a few drafts are made upon such deposits, they have ample resources for meeting them in their cash deposits with the national banks.

The subject of bending the trust companies to the same rules as those which govern the New York Clearing House banks has been more or less discussed since the growth of the trust companies has made them an important factor in the banking resources of New York. One of the propositions which has been most seriously discussed has been that the trust companies should be required to keep something like the same cash reserves as the national banks. The national banks of New York are required by law to keep in currency an amount equal to 25 per cent of their deposits, and the State banks which are members of the Clearing House are compelled to conform to the same rule. The state of this cash reserve,—whether there is a large surplus reserve,

or whether it is near the legal minimum, —is one of the barometers of New York money-market conditions which always receives the most attentive study at home and abroad. The trust companies have heretofore kept such reserves as, in the opinion of their officers, were required to meet demands upon them; but they have in most instances kept the bulk of these reserves on deposit in national banks. A check upon a national bank deposit is usually more acceptable to one of their clients in a large transaction than would be a roll of bills or a keg of gold. For smaller demands from their clients for pocket money the trust companies keep such cash on hand as they find necessary, but they have fewer active accounts of this sort than the national banks, and few large demands are made upon them for actual currency.

The national banks of the cities enjoy an important privilege which is not granted to the trust companies. Outside of New York, the national banks are permitted to deposit one-half or more of their reserve

in the national banks of New York, and to count such deposits as cash on hand. An enormous volume of such deposits is carried by the national banks, and they have greatly increased within ten years, as may be seen by the following table:

OBLIGATIONS OF NATIONAL BANKS TO OTHER BANKS

Date.	To national banks.	To State and private banks and trust companies.
July 12, 1892....	$367,143,324	$188,683,254
July 23, 1897....	388,117,906	208,876,900
July 15, 1901....	645,038,393	526,151,801
July 16, 1902....	626,954,587	582,102,814
June 9, 1903....	627,514,736	551,286,533

It is obvious from these figures that the national banks have profited greatly within the past five years in their command over the resources of their fellows in the national banking system, and that they have had voluntarily intrusted to them a large share of the cash of the State banks and trust companies. It is naturally contended on behalf of the trust companies that they

should not be burdened with any such reserve requirements as are imposed upon the national banks, unless they are granted the privilege of receiving the deposits of the national banks of the country, and the latter are permitted to count such deposits as a part of their lawful reserves.

The officers of the stronger trust companies would probably be glad to comply with the requirement that they should keep a reasonable reserve in proportion to their deposits. Such a requirement would be rigidly complied with, and if it imposed burdens upon the weaker companies which wiped out their slender profits, it would not be a source of regret to the stronger companies to see establishments driven from the field which may not be hardy enough to weather financial storms.

A reserve of 15 per cent of deposits would be more than sufficient to meet all possible demands upon the trust companies, and at least half of this reserve, if not two-thirds, might properly be kept on deposit in national banks. Fifteen per cent of $1,589,398,796,—the deposits of

the trust companies of the United States in 1903,—would be about $238,000,000. The trust companies actually had due to them from other banks $252,837,891,—an amount more than sufficient to meet a 15 per cent reserve requirement, They had also cash to the amount of $49,082,628,—about 3 per cent of their deposit obligations. The requirement that they should keep 15 per cent in currency locked up in their own vaults would mean that they should withdraw nearly $189,000,000 from other banks and practically withdraw that much money from the use of the market.

Several of the strongest trust companies in New York already meet the requirement that they shall keep a reserve equal to 15 per cent of their deposits, but keep most of it in other banks. Thus, on January 1, 1904, the Morton Trust Company, with deposits of $40,100,261, had on deposit in banking institutions subject to check $15,231,384; the Mercantile Trust Company, with deposits of $48,669,720, had on deposit $10,883,938; the

Farmers' Loan and Trust Company, with deposits of $49,683,643, had on deposit $5,906,440, and also the considerable sum of $2,809,220 in cash; while the New York Security and Trust Company, with deposits of $29,942,949, had on deposit with banks $4,495,639.

The second of the requirements suggested—that a trust company should keep one-third or one-half of its reserve in its own vaults—could not be enforced, except after long previous notice, without serious effects upon the money market. With total deposits in New York City at the beginning of 1904 amounting to about $570,000,000, a reserve of 15 per cent would be about $85,000,000, half of which would be about $42,500,000. The total reserves of the trust companies in the city of New York at that date were $124,854,495, but of this amount only $19,822,407 was in currency in their hands. In order to comply with a requirement for a 15 per cent reserve, kept entirely in cash, it would be necessary to withdraw more than $65,000,000 in currency from actual

use and lock it up in gold, silver, and greenbacks in the vaults of the trust companies.

Fears have sometimes been expressed that the keeping of trust-company reserves on deposit in national banks, instead of in actual currency in their own vaults, tended, along with other recent developments, to rear a structure of credit too lofty for the slender foundation of currency at its base. Comparison with the British system, however, is distinctly favorable to the solidity of conditions in New York. The reserves of the New York Clearing House banks for the week ending June 18, 1904, were $319,373,000. This reserve is distributed among fifty-nine different institutions, and the proportion of reserve is, on the whole, much larger than that held under the monetary system of Great Britain.

In London the reserve in actual cash is held entirely by the Bank of England. Other banks content themselves with keeping in their own custody only such little cash as may be required for daily

retail needs, known as "till money." The joint-stock banks keep deposits with the Bank of England, and the private and country banks keep deposits with the joint-stock banks. The system thus depends absolutely upon the solidity of a single institution—the Bank of England. The British system has the advantage of economy in the use of money, but the American system is more exacting in its safeguards. As the London *Statist* remarked in the spring of 1902: "Were the New York banks permitted to work with as small a margin of actual cash against liabilities as we do in this country, they would be able to greatly increase their loans and their deposits."

How far the demand for arbitrarily fixed reserves is a matter of sentiment was shown by the effect of the action of Secretary Shaw in the autumn of 1902 in seeking to relieve the pressure on the money market. By a stroke of his pen he decided that he would permit national banks to hold deposits of government funds, without keeping against

such deposits the reserves of 15 per cent or 25 per cent required against other classes of deposits. By this measure, it was announced, the loaning power of the banks would be increased by about $130,000,000. It is obvious that, from the standpoint of sound banking, the banks were no stronger after this announcement than before. If they needed a 25 per cent reserve against gross deposits, the Secretary was wrong in suspending the requirement; if they did not need it, the public was wrong in feeling alarm when reserves against gross deposits, before the Secretary's action, fell below 25 per cent.

The true banking rule is that a banking institution shall pay legal-tender money upon its deposit and note obligations whenever such money is demanded, whether its reserve be one per cent or 100 per cent. The bank answers with its life for its ability to do this, and the necessity that it shall live exerts a more constant and potent pressure upon its officers than the requirement that unused money shall be piled up in reserve funds. In the

national banking system, with its hundreds of banks of small capital scattered over forty-five States, legal regulation of reserves is a matter of prudence and public convenience. In some of the States such regulation may be justified upon the same grounds, but it is necessary in inverse ratio to the degree of financial progress of the community and the importance of the stake of its financial leaders in the soundness and solvency of their enterprises.

If a specific reserve requirement is necessary for the prudent conduct of trust companies or the safety of the market, it should be imposed. It is obvious, however, that it could not be complied with suddenly without causing a convulsion in the money market. This was recognized by the Committee of the New York Clearing House in their demand, in the spring of 1903, that trust companies enjoying the privileges of the Clearing House should accumulate reserves in actual cash of 10 per cent. Only 2½ per cent was required before June

1, 1903; 2½ per cent more before February 1, 1904; and 5 per cent more, making the total of 10 per cent, before June 1, 1904. Such an increase of reserves could not be accomplished under the most favorable circumstances except at considerable cost, which would not fall upon the trust companies, but upon the public. The community would be deprived of the use of $50,000,000 of its working capital or be compelled to import that sum to make good the amount withdrawn from active use. It would amount practically to setting aside and locking up that much gold, to lie idle or to be used only in great emergencies, like those for which the war treasure of $30,000,000 is so sacredly guarded by the German Emperor in the fortress of Spandau.

If the privileges enjoyed by either the national banks or the trust companies involve danger or disadvantage to the community, or if they threaten to drive one class of institutions out of existence, they should be restricted. The national banks and the trust companies,

however, while they trench to some extent on each other's fields, each has functions to perform which differ from those of the other. It would be extremely harmful to chain either class of institutions upon a Procrustean bed of regulations or burdens, suited perhaps to one and not suited to the other. The national banking law could probably be amended to advantage in a direction which would give greater scope to the national banks in doing business; but it would be a step in the wrong direction to extend the restrictions imposed upon them, if they have been found burdensome, to a class of institutions which have contributed so much as the trust companies to the industrial triumphs of America in recent years.

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